American Journal of Physiology: Cell Physiology

INVIT	FFD	Property of	THE REAL
INVI	IED	REV	IE W

	INVITED REVIEW	
	In search of a second messenger for insulin A. R. Saltiel and P. Cuatrecasas	C1
No. 2. Al	Gene transfer of a putative mammalian K ⁺ channel gene from genomic and cosmid DNA M. Mitas, C. Coogan, and J. J. Gargus	C12
	Attachment and maintenance of adult rabbit cardiac myocytes in primary cell culture J. Haddad, M. L. Decker, LC. Hsieh, M. Lesch, A. M. Samarel, and R. S. Decker	C19
No. 2. AUC	R. G. Schnellmann	C28
	Gene transfer of a putative mammalian K* channel gene from genomic and cosmid DNA M. Mitas, C. Coogan, and J. J. Gargus Attachment and maintenance of adult rabbit cardiac myocytes in primary cell culture J. Haddad, M. L. Decker, LC. Hsieh, M. Lesch, A. M. Samarel, and R. S. Decker Mechanisms of t-butyl hydroperoxide-induced toxicity to rabbit renal proximal tubules R. G. Schnellmann Regulation of glycerinated smooth muscle contraction and relaxation by myosin phosphorylation J. A. Tanner, J. R. Haeberle, and R. A. Meiss Metabolic and fiber size properties of cat tibialis anterior motor units T. P. Martin, S. Bodine-Fowler, R. R. Roy, E. Eldred, and V. R. Edgerton Changes in expression of a functional G, protein in cultured rat heart cells I. S. Allen, S. T. Gaa, and T. B. Rogers Insulin improves rat soleus axon function by increasing glucose transport J. B. Pickett Uptake and intracellular fate of [14C] sucrose-insulin in perfused rat livers C. A. Surmacz, J. J. Wert, Jr., W. F. Ward, and G. E. Mortimore Separate control of regulatory volume increase and Na*-H* exchange by cultured renal cells M. H. Montrose, C. Knoblauch, and H. Murer Regulation of shortening velocity by cross-bridge phosphorylation in smooth muscle CM. Hai and R. A. Murphy Effect of Na* on intestinal succinate transport and metabolism in vitro A. J. Moe, R. T. Mallet, M. J. Jackson, J. A. Hollywood, and J. K. Kelleher Different physiological signatures of sweat gland secretory and duct cells in culture C. J. Jones, C. L. Bell, and P. M. Quinton Pathways of Cl* transport in human fibroblasts P. Lin and E. Gruenstein Liver and heart mitochondria in rats submitted to chronic hypobaric hypoxia L. E. Costa, A. Boveris, O. R. Koch, and A. C. Taquini ANNOUNCEMENTS AUGUST 1988 EDITORIAL A new journal J. T. Tildon and L. M. Roeder G-1,6-P., glycolysis, and energy metabolism during circulatory occlusion in human skeletal muscle A. Katz	C34
		C43
	I. S. Allen, S. T. Gaa, and T. B. Rogers	C51
	J. B. Pickett	C60
	C. A. Surmacz, J. J. Wert, Jr., W. F. Ward, and G. E. Mortimore	C70
	by cultured renal cells	C76
	Regulation of shortening velocity by cross-bridge phosphorylation in smooth muscle	C86
		C98
		C105
		C115
		C12
	ANNOUNCEMENTS	C136
No. 2. A	UGUST 1988	
	EDITORIAL	
		C13
		C13
	in human skeletal muscle	C14
	G-1,6- P_2 in human skeletal muscle after isometric contraction A. Katz and A. D. Lee	C14

	but not phospholipase C	
	H. Sugiya and J. W. Putney, Jr.	C149
	Modulation of Na*-P; cotransport in opossum kidney cells by extracellular phosphate J. Biber, J. Forgo, and H. Murer	C155
	Myocyte deenergization and intracellular free calcium dynamics Q. Li, R. A. Altschuld, and B. T. Stokes	C162
	Reduced Na-K-Cl cotransport in vascular smooth muscle cells from spontaneously hypertensive rats	0.00
	M. E. O'Donnell and N. E. Owen Survey of osmolytes in renal cell lines	C169
	T. Nakanishi, R. S. Balaban, and M. B. Burg	C181
	Sustained function of normoxic hearts depleted in ATP and phosphocreatine: a ³¹ P-NMR study	0100
	J. A. Hoerter, C. Lauer, G. Vassort, and M. Guéron Nonrandom turnover of actin and tubulin in cultured rabbit cardiac fibroblasts	C192
	W. R. Mostow, A. G. Ferguson, M. Lesch, R. S. Decker, and A. M. Samarel	C202
	Histamine stimulation of prostaglandin and HETE synthesis in human endothelial cells G. E. Revtyak, M. J. Hughes, A. R. Johnson, and W. B. Campbell	C214
	Assessment of transport capacity of plasmalemmal Ca ²⁺ pump in smooth muscle P. A. Lucchesi, R. A. Cooney, C. Mangsen-Baker,	C226
	T. W. Honeyman, and C. R. Scheid Effect of hormones on growth and function of cultured canine tracheal epithelial cells	C220
	M. R. Van Scott, N. P. Lee, J. R. Yankaskas, and R. C. Boucher	C237
	8-BrcAMP does not affect Na-K-2Cl cotransport in winter flounder intestine M. C. Rao and N. T. Nash	C246
	Increased abundance of Na ⁺ -K ⁺ -ATPase mRNAs in response to low external K ⁺ T. A. Pressley, F. Ismail-Beigi, G. G. Gick, and I. S. Edelman	C252
No. 3. SEP	TEMBER 1988	
	Growth-dependent regulation of system A in SV40-transformed fetal rat hepatocytes M. E. Handlogten and M. S. Kilberg	C261
	De novo synthesis of adenine nucleotides in different skeletal muscle fiber types P. C. Tullson, H. B. John-Alder, D. A. Hood, and R. L. Terjung	C271
	Na ⁺ -Ca ²⁺ exchange in regulation of contractility in canine cardiac Purkinje fibers J. K. Sonn and C. O. Lee	C278
	Effects of carbon monoxide on cardiac muscle cells in culture A. C. Nag, K. C. Chen, and M. Cheng	C291
	Effect of superoxide radical on Ca ²⁺ pumps of coronary artery A. K. Grover and S. E. Samson	C297
	Conversion of esterified fura-2 and indo-1 to Ca ²⁺ -sensitive forms by mitochondria	
	T. E. Gunter, D. Restrepo, and K. K. Gunter Water permeability of isolated endothelial cells at different temperatures	C304
	R. A. Garrick, U. S. Ryan, and F. P. Chinard Extracellular acidosis delays onset of cell death in ATP-depleted hepatocytes	C311
	G. J. Gores, AL. Nieminen, K. E. Fleishman, T. L. Dawson, B. Herman, and J. J. Lemasters	C315
	Na*-Ca ²⁺ exchange in sarcolemmal membrane vesicles of dog mesenteric artery M. A. Matlib	C323
	Volume and anion dependency of ouabain-resistant K-Rb fluxes in sheep red blood cells P. K. Lauf	C331
,	Inactivation of amino acid transport in rat hepatocytes and hepatoma cells by PCMBS T. C. Chiles, K. L. Dudeck-Collart, and M. S. Kilberg	C340
,	Properties of K ⁺ transport in resealed human erythrocyte ghosts C. Brugnara, T. Van Ha, and D. C. Tosteson	C346
	Effects of oxytocin on cation content and electrophysiology of frog skin epithelium	
	H. F. Schoen, A. Kaufman, and D. Erlij	C357

	Bacterial exotoxins and endothelial permeability for water and albumin in vitro N. Suttorp, T. Hessz, W. Seeger, A. Wilke, R. Koob, F. Lutz, and D. Drenckhahn	C368
	Intracellular sodium flux and high-energy phosphorus metabolites in ischemic skeletal muscle	
	H. Blum, M. D. Schnall, B. Chance, and G. P. Buzby	C377
	Benzodiazepines inhibit transport-related oxygen consumption in thick ascending limb F. N. Ziyadeh and Z. S. Agus	C385
	Dependence of force, velocity, and ${\rm O_2}$ consumption on ${\rm [Ca^{2+}]_o}$ in porcine carotid artery $J.~M.~Krisanda~and~R.~J.~Paul$	C393
	Sr ²⁺ activates cross-bridge phosphorylation and latch state in smooth muscle CM. Hai and R. A. Murphy	C401
	RAPID COMMUNICATIONS	
	Double-barreled K ⁺ -selective microelectrodes based on dibenzo-18-crown-6 J. L. Mooney, V. Lyall, M. Acevedo, and W. M. Armstrong	C408
	Insulin-like growth factor 1 stimulates renal epithelial Na ⁺ transport B. L. Blazer-Yost and M. Cox	C413
No. 4. O	CTOBER 1988	
	INVITED REVIEW	
	Mammalian blastocyst: transport functions in a developing epithelium J. D. Biggers, J. E. Bell, and D. J. Benos	C419
	Effect of leukotriene C_4 on electromechanical activity and Ca^{2+} uptake in taenia coli A. Zschauer, E. K. Matthews, and B. P. Richardson	C433
	Activation of a calcium-permeable cation channel by insulin-like growth factor II in BALB/c 3T3 cells H. Matsunaga, I. Nishimoto, I. Kojima, N. Yamashita, K. Kurokawa, and E. Ogata	C442
	Epidermal growth factor-mediated effects on equine vascular smooth muscle cells D. A. Grosenbaugh, M. S. Amoss, D. M. Hood, S. J. Morgan, and J. D. Williams	C447
	Development of a new fluorescent angiotensin II probe V. Fatigati and M. J. Peach	C452
	Intracellular pathways of insulin transport across vascular endothelial cells H. L. Hachiya, P. A. Halban, and G. L. King	C459
	Role of magnesium in activation of smooth muscle R. J. Paul and J. C. Rüegg	C465
	Dependence of stress on length, Ca ²⁺ , and myosin phosphorylation in skinned smooth muscle R. S. Moreland, S. Moreland, and R. A. Murphy	C473
	Ouabain uptake by endocytosis in isolated guinea pig atria H. Núñez-Durán, L. Riboni, E. Ubaldo, E. Kabela, and L. Bárcenas-Ruiz	C479
	Na $^+$ -coupled sugar transport: membrane potential-dependent $K_{\rm m}$ and $K_{\rm i}$ for Na $^+$ $G.$ $A.$ $Kimmich$ and $J.$ $Randles$	C486
	LLC-PK ₁ mutant with increased Na ⁺ -H ⁺ exchange and decreased sensitivity to amiloride J. G. Haggerty, N. Agarwal, E. J. Cragoe, Jr., E. A. Adelberg, and C. W. Slayman	C495
	Vasopressin stimulates phosphoinositide hydrolysis in LLC-PK ₁ cells L. C. Garg, E. Kapturczak, M. Steiner, and M. I. Phillips	C502
	K* transport and membrane potentials in isolated rat parotid acini B. Nauntofte and S. Dissing	C508
	Hemin increases aerobic capacity of cultured regenerating skeletal myotubes N. A. Schroedl, V. L. Funanage, C. R. Bacon, S. M. Smith, and C. R. Hartzell	C519
	Cytochalasin B inhibition of toad bladder apical membrane responses to ADH	C526

	Cell cycle dependence of mositol phosphate levels in neuroblastoma cells L . F . F leischman and L . C antley	C531
	Heat production of rat anococcygeus muscle during isometric contraction J. S. Walker, I. R. Wendt, and C. L. Gibbs	C536
	Chronic stimulation of mammalian muscle: changes in metabolite concentrations in individual fibers J. Henriksson, S. Salmons, M. MY. Chi, C. S. Hintz, and O. H. Lowry	C543
	Regulation of conductive Cl ⁻ transport in human fibroblasts P. Lin, M. Ahluwalia, and E. Gruenstein	C552
	Platelet activating factor induces dopamine release in PC-12 cell line F. Bussolino, F. Tessari, F. Turrini, P. Braquet, G. Camussi, M. Prosdocimi, and A. Bosia	C559
	SPECIAL COMMUNICATIONS	
	Simultaneous Nomarski and fluorescence imaging during video microscopy of cells $J.\ K.\ Foskett$	C566
No. 5. NO	VEMBER 1988	
	Blunted cGMP response to ANF in vascular smooth muscle cells of SHR M. Nakamura, A. Nakamura, B. Fine, and A. Aviv	C573
	Adenosine receptor-mediated calcium mobilization in cortical collecting tubule cells L. J. Arend, M. A. Burnatowska-Hledin, and W. S. Spielman	C581
	Diacylglycerol kinase inhibitor R59022 and stimulated neutrophil responses JL. Mege, W. Tao, T. F. P. Molski, J. Gomez-Cambronero, CK. Huang, E. L. Becker, and R. I. Sha'afi	C589
	Cellular pH and Na ⁺ -H ⁺ exchange activity in lens epithelium of Bufo marinus toad J. M. Wolosin, L. J. Alvarez, and O. A. Candia	C595
	Neutrophil cathepsin G increases permeability of cultured type II pneumocytes T. Rochat, J. Casale, G. W. Hunninghake, and M. W. Peterson	C603
	RVD in principal and intercalated cells of rabbit cortical collecting tubule K. Strange	C612
	Binding and internalization of a fluorescent vasopress in analogue by collecting duct cells $\it K. L. Kirk$	C622
	TRH and BAY K 8644 synergistically stimulate prolactin release but not 45Ca ²⁺ uptake J. A. Pachter, G. J. Law, and P. S. Dannies	C633
	Role of vesicular transport in ADH-stimulated aggregate delivery G. Ding, N. Franki, J. Bourguet, and R. M. Hays	C641
	Electrical coupling and pacemaker activity in colonic smooth muscle J. D. Huizinga, A. Shin, and E. Chow	C653
	Dexamethasone accelerates differentiation of A6 epithelia and increases response to vasopressin A. S. Preston, J. Muller, and J. S. Handler	C661
	GTPγS loading of endothelial cells stimulates phospholipase C and uncouples ATP receptors T. A. Brock, P. A. Dennis, K. K. Griendling, T. S. Diehl, and P. F. Davies	C667
	Altered junctional permeability between cells transformed by v-ras, v-mos, or v-src M. M. Atkinson and J. D. Sheridan	C674
	Coordination of electromechanical and metabolic properties of cat soleus motor units T. P. Martin, S. Bodine-Fowler, and V. R. Edgerton	C684
	SPECIAL COMMUNICATIONS	_
	Continuous monitoring of Ca ²⁺ uptake in membrane vesicles with fura-2 M. E. Kargacin, C. R. Scheid, and T. W. Honeyman	C694

RAPID COMMUNICATIONS

- Cell uncoupling and protein kinase C: correlation in a cell line but not in a differentiated tissue
 - M. Chanson, R. Bruzzone, D. C. Spray, R. Regazzi, and P. Meda

C699

No. 6. DECEMBER 1988

- Potassium transport by pancreatic and parotid zymogen granule membranes
 - K. W. Gasser, J. DiDomenico, and U. Hopfer

C705

- Uracil ribonucleotide metabolism in rat and human glomerular epithelial and mesangial cells
 - F. Dumler and P. Cortes

C712

- $[Ca^{2+}]$ -dependent myosin phosphorylation in phorbol diester stimulated smooth muscle contraction
 - C. M. Rembold and R. A. Murphy

C719

- Role of α_1 and α_2 -adrenergic receptors in Cl⁻ transport across frog corneal epithelium T.-C. Chu and O. A. Candia
- Fast axonal transport of labeled proteins in motoneurons of exercise-trained rats

C724

- B. J. Jasmin, P.-A. Lavoie, and P. F. Gardiner

 Low-affinity intestinal L-aspartate transport with 2:1 coupling
- stoichiometry for Na+/Asp
 T. G. Wingrove and G. A. Kimmich

C737

- Na*-sugar cotransport system as a polarization marker during organization of epithelial membrane
 - C. Lasheras, J. A. Scott, and C. A. Rabito

C745

- Extensive changes in collagen synthesis and degradation
- during compensatory lung growth

C754

- R. J. McAnulty, L. H. Staple, D. Guerreiro, and G. J. Laurent
 Differentiated properties of rabbit tracheal epithelial cells in primary culture
 - C. M. Liedtke

C760

Identification and transmembrane signaling of leukotriene D₄ receptors

M. S. Simonson, P. Mené, G. R. Dubyak, and M. J. Dunn

in human mesangial cells

C771

- Oxidants and conductance of cultured epithelial cell monolayers:
- inositol phospholipid hydrolysis

 D. M. Shasby, M. Winter, and S. S. Shasby

C781

Chloride transport across placental microvillous membranes measured by fluorescence N. P. Illsley, C. Glaubensklee, B. Davis, and A. S. Verkman

C789

- Role of a_{Na}^i in positive force-frequency staircase in guinea pig papillary muscle D. Y. Wang, S. W. Chae, Q. Y. Gong, and C. O. Lee
- C798
- Apical membrane potassium conductance in guinea pig gallbladder epithelial cells $P.\ J.\ Gunter\mbox{-}Smith$

C808

Increased trehalase expression after glucose limitation of LLC- PK_1 clones Y. Yoneyama and J. E. Lever

C816

- Carrier-mediated transport of pyroglutamyl-histidine in renal brush border membrane vesicles
 - H. A. Skopicki, K. Fisher, D. Zikos, G. Flouret, R. Bloch, S. Kubillus, and D. R. Peterson

C822

Effects of membrane potential on electrical slow waves of canine proximal colon T. K. Smith, J. B. Reed, and K. M. Sanders

C828

- Antibodies against purified epithelial sodium channel protein from bovine renal papilla E. J. Sorscher, M. A. Accavitti, D. Keeton, E. Steadman,
 - R. A. Frizzell, and D. J. Benos

C835

- pH regulation in single glomerular mesangial cells. I. Acid extrusion in absence and presence of HCO_7^-
 - G. Boyarsky, M. B. Ganz, R. B. Sterzel, and W. F. Boron

C844

pH regulation in single glomerular mesangial cells. II. Na*-dependent and -independent Cl*-HCO; exchangers G. Boyarsky, M. B. Ganz, R. B. Sterzel, and W. F. Boron	C857
RAPID COMMUNICATIONS	
Expression of cardiac sarcolemmal Na ⁺ -Ca ²⁺ exchange activity in Xenopus laevis oocytes S. Longoni, M. J. Coady, T. Ikeda, and K. D. Philipson	C870
MDA content increases in fast- and slow-twitch skeletal muscle with intensity of exercise in a rat	
H. M. Alessio, A. H. Goldfarb, and R. G. Cutler	C874
ANNOUNCEMENTS	C878
Subject Index to Volume 24	C879
Author Index to Volume 24	C888

American Journal of Physiology: Endocrinology and Metabolism

No. 1. JUL	Y 1988	
	Effect of short-term DHEA administration on liver metabolism of lean and obese rats P. F. Mohan and M. P. Cleary	E1
	Parathyroid hormone depresses cytosolic pH and DNA synthesis in osteoblast-like cells I. R. Reid, R. Civitelli, L. V. Avioli, and K. A. Hruska	E 9
	Angiotensin II receptors in rabbit renal preglomerular vessels G. P. Brown and R. C. Venuto	E16
	Adrenal sympathetic efferent nerve and catecholamine secretion excitation caused by capsaicin in rats T. Watanabe, T. Kawada, M. Kurosawa, A. Sato, and K. Iwai	E23
	Ontogenesis of epidermal growth factor in liver of BALB mice N. P. Laborde, M. Grodin, G. Buenaflor, P. Brown, and D. A. Fisher	E28
	Physiological insulin action is opposed by β -adrenergic mechanisms in dogs $G.A.$ Werther, $S.$ Joffe, $R.$ Artal, and $M.$ A. Sperling	E33
	Circadian rhythm in sensitivity of glucose metabolism to insulin in rat soleus muscle B. Leighton, J. M. Kowalchuk, R. A. J. Challiss, and E. A. Newsholme	E41
	Effects of CRF and ANG II on ACTH and vasopressin release in conscious dogs C. K. Klingbeil, L. C. Keil, D. Chang, and I. A. Reid	E46
	Impaired transport of thyroid hormones into livers of obese (ob/ob) mice F. B. Hillgartner and D. R. Romsos	E54
	Calmodulin antagonist effects on GnRH and secretogogue-induced release of bovine LH J. P. Kile and M. S. Amoss, Jr.	E59
	Minimizing perioperative hypoxemia does not affect postpneumonectomy lung growth H. W. Karl, E. B. Wolpert, and D. E. Rannels	E65
	Regulation of angiotensinogen mRNA accumulation in rat hepatocytes E. T. Ben-Ari and J. C. Garrison	E70
	Three-compartmental analysis of effects of D-propranolol on thyroid hormone kinetics J. T. M. van der Heijden, E. P. Krenning, H. van Toor, G. Hennemann, and R. Docter	E80
	Effects of somatostatin and glucose infusion on glucose kinetics in fetal sheep C. A. Bloch, R. K. Menon, and M. A. Sperling	E87
	MODELING METHODOLOGY FORUM	
N- 0 AII	Measuring tracee turnover from tracer specific activity in the steady state S. L. Lehman and W. C. Stanley GUST 1988	E94
NO. 2. AU	EDITORIAL	
	A new journal P. C. Johnson	E99
	Effect of a thermogenic agent, BRL 26830A, on insulin receptors in obese mice N. Rochet, JF. Tanti, T. Grémeaux, E. Van Obberghen, and Y. Le Marchand-Brustel	E10
	Uptake of thyroxine by the perfused rat liver: implications for the free hormone hypothesis C. M. Mendel, R. R. Cavalieri, and R. A. Weisiger	E11
	Effects of repeated cycles of fasting-refeeding on brown adipose tissue composition in mice	
	M. Desautels and R. A. Dulos	E12

	Sodium balance effects on renin, angiotensinogen, and atrial natriuretic polypeptide mRNA levels H. Iwao, K. Fukui, S. Kim, K. Nakayama, H. Ohkubo,	F100
	S. Nakanishi, and Y. Abe Two types of calcium channels and hormone release in human pituitary tumor cells N. Yamashita, H. Matsunaga, N. Shibuya, A. Teramoto,	E129
	K. Takakura, and E. Ogata Effect of thyroid hormones on oxidative and nonoxidative glucose metabolism in humans	E137
	M. J. Müller, K. J. Acheson, E. Jequier, and A. G. Burger Glucocorticoids modulate β -adrenoceptor subtypes and adenylate cyclase in brown fat	E146
	P. J. Scarpace, L. A. Baresi, and J. E. Morley	E153
	Phenylarsine oxide and denervation effects on hormone-stimulated glucose transport M. O. Sowell, K. A. Robinson, and M. G. Buse	E159
	Relationship between glutamine concentration and protein synthesis in rat skeletal muscle M. M. Jepson, P. C. Bates, P. Broadbent, J. M. Pell, and D. J. Millward	E166
	Role of sialic acid in insulin action and the insulin resistance of diabetes mellitus A. I. Salhanick and J. M. Amatruda	E173
	Sympathetic nervous system responses to cold exposure and diet in rat skeletal muscle A. G. Dulloo, J. B. Young, and L. Landsberg	E180
	Pancreatic islet discrimination of hexose anomers. I. Steady-state computer simulation M. J. Achs and D. Garfinkel	E189
	Pancreatic islet discrimination of hexose anomers. II. Transient computer simulation M. J. Achs and D. Garfinkel	E201
	Hormonal and metabolic response to recombinant human tumor necrosis factor in rat: in vitro and in vivo R. S. Warren, H. F. Starnes, Jr., N. Alcock, S. Calvano, and M. F. Brennan	E206
	Chronic intracerebroventricular CRF infusion attenuates ACTH-corticosterone release J. J. Cunningham, P. A. Meara, R. Y. Lee, and H. H. Bode	E213
	RAPID COMMUNICATIONS	
	Characterization by microdialysis of intercellular glucose level in subcutaneous tissue in humans	
	PA. Jansson, J. Fowelin, U. Smith, and P. Lönnroth	E218
	LETTERS TO THE EDITOR	
	On plasma protein-mediated transport of steroid and thyroid hormones C. M. Mendel, R. R. Cavalieri, and R. A. Weisiger; W. M. Pardridge	E221
No. 3. SI	EPTEMBER 1988	
	Responsiveness of isolated adrenocortical cells from lean and obese Zucker rats to ACTH B. D. White, W. D. Davenport, and J. R. Porter	E229
	Very-low-density lipoprotein triglyceride kinetics in acute and chronic carbohydrate-fed rats	Food
	T. Hirano, J. Mamo, M. Poapst, and G. Steiner Steroid inhibition of canine ACTH: in vivo evidence for feedback at the corticotrope M. Keller-Wood, E. Leeman, J. Shinsako, and M. F. Dallman	E236 E241
	Metabolic fate of rat heart endothelial lipoprotein lipase T. Chajek-Shaul, G. Bengtsson-Olivecrona, J. Peterson, and T. Olivecrona	E247
	Effects of corticotropin-releasing factor on food intake and brown adipose tissue thermogenesis in rats	ZZZ I
	K. Arase, D. A. York, H. Shimizu, N. Shargill, and G. A. Bray	E255
	Effect of α - and β -adrenergic stimulation on atrial natriuretic peptide release in vitro N. L. M. Wong, E. F. C. Wong, G. H. Au, and D. C. K. Hu	E260

Circadian variation in response to CRF-41 and AVP M. Graf, A. J. Fischman, A. J. Kastin, and R. L. Moldow	E265
[3H]rauwolscine binding to myometrial α_2 -adrenoceptors in pregnant guinea pig S. J. Arkinstall and C. T. Jones	E272
Effect of postweaning thyroid status on edocrine and adipose development in rats M. Q. Robert and E. Herrera	E280
Regulation of corticotropin-releasing factor secretion in vitro by glucose E. P. Widmaier, P. M. Plotsky, S. W. Sutton, and W. W. Vale	E287
Binding proteins for growth hormone and prolactin in rabbit kidney cytosol A. C. Herington, J. L. Stevenson, and S. I. Ymer	E293
Effects of calcium on synthesis and secretion of parathyroid hormone and secretory protein I	
R. R. MacGregor, D. A. Hinton, and R. D. Ridgeway Effects of flow rate and insulin on triacylglycerol secretion by perfused rat liver	E299
D. L. Topping, G. B. Storer, and R. P. Trimble Gonadal steroid effects on LH response to arachidonic acid and protein kinase C	E306
F. Kamel and C. L. Kubajak	E314
Quantitative study in vivo of methionine cycle in humans using [methyl-2H ₃]- and [1-13C]methionine K. J. Storch, D. A. Wagner, J. F. Burke, and V. R. Young	E322
Short-term energy balance: relationship with protein, carbohydrate, and fat balances W. G. H. Abbott, B. V. Howard, L. Christin, D. Freymond, S. Lillioja, V. L. Boyce, T. E. Anderson, C. Bogardus, and E. Ravussin	E332
Angiotensin II causes sustained elevations in cytosolic calcium in glomerulosa cells R. E. Kramer	E338
Increased SR phospholipid N-methylation in skeletal muscle of diabetic rats Y. Taira, P. K. Ganguly, V. Panagia, and N. S. Dhalla	E347
Triton WR-1339 injected into rats enters renal renin granules B. J. Morris	E353
In vivo characterization of insulin uptake by dog renal cortical epithelium C. I. Whiteside, C. J. Lumsden, and M. Silverman	E357
Physiological hypercortisolemia increases proteolysis, glutamine, and alanine production D. Darmaun, D. E. Matthews, and D. M. Bier	E366
Glucose transport: locus of accept it with resistance in close Zucker rats W. M. Sherman, A. L. Katz, C. L. Catter, A. T. Webers, and J. L. Ivy	E374
Ouabain induces secretion of provided statiures of year at atrial cardiocytes K. D. Bloch, N. Zamir, D. Lantstein, C. E. Seidman, and J. G. Seidman	E383
Perinatal expression of the atrix'l natriuretic factor gene in rat cardiac tissue J. Wu, C. F. Deschepper, and D. G. Gardner	E388
Dexamethasone regulates glutamime synthetase expression in rat skeletal muscles S. R. Max, J. Mill, K. Measow, M. Konagaya, Y. Konagaya, J. W. Thomas, C. Banner, and L. Vitkovic	E397
LETTERS TO THE EDITOR	
Plasma protein-mediated transport of steroid and thyroid hormones: a critique R. P. Ekins and P. R. Edwards; W. M. Pardridge and E. M. Landaw	E403
OBER 1988	
Effect of thyroidectomy on rat T-kininogen J. Bouhnik, F. Savoie, T. Baussant; A. Michaud, F. Alhenc-Gelas, and P. Corvol	E411

No. 4. OC

E411
E416

Diazoxide unmasks glucose inhibition of insulin release by counteracting entry of Ca ²⁺ P. Bergsten, E. Gylfe, N. Wesslén, and B. Hellman	E422
Metabolic role of the exercise-induced increment in epinephrine in the dog J. M. Moates, D. B. Lacy, R. E. Goldstein,	
A. D. Cherrington, and D. H. Wasserman	E428
Effects of hypercalcemia and ouabain on plasma atrial natriuretic polypeptide in anesthetized dogs	
A. Yamamoto, T. Shouji, S. Kimura, Y. Aki, A. Nakamura, K. Fukui, H. Iwao, and Y. Abe	E437
Modulation of rat testes lipid composition by hormones: effect of PRL and hCG E. Sebokova, A. Wierzbicki, and M. T. Clandinin	E442
Effect of vasopressin on atrial natriuretic peptide release and renal function in dogs M. Inoue, T. Kimura, K. Ota, K. Iitake, M. Shoji, K. Sato, M. Ota, and K. Yoshinaga	E449
Effect of prior immobilization on muscular glucose clearance in resting and running rats J. Vissing, T. Ohkuwa, T. Ploug, and H. Galbo	E456
Central catecholaminergic system stimulates secretion of CRH at different sites A. Szafarczyk, V. Guillaume, B. Conte-Devolx, G. Alonso, F. Malaval,	
N. Pares-Herbuté, C. Oliver, and I. Assenmacher	E463
Role of Ca ²⁺ and Na ⁺ on luteinizing hormone release from the calf pituitary J. P. Kile and M. S. Amoss, Jr.	E469
Regulation of valine and α -ketoisocaproate metabolism in rat kidney mitochondria $R. H. Miller \ and \ A. E. Harper$	E475
Gonadotropin-releasing hormone sensitivity in underfed prepubertal female rats K. M. Lively and B. E. Piacsek	E482
Calcium response of single adrenal glomerulosa cells to external potassium S. J. Quinn, G. H. Williams, and D. L. Tillotson	E488
Cold exposure rapidly induces virtual saturation of brown adipose tissue nuclear T_3 receptors A. C. Bianco and J. E. Silva	E496
Distinct receptors for insulin-like growth factor I in rat renal glomeruli and tubules D. J. Pillion, J. F. Haskell, and E. Meezan	E504
Induction of mRNA for IGF-I and -II during growth hormone-stimulated muscle hypertrophy	
J. D. Turner, P. Rotwein, J. Novakofski, and P. J. Bechtel	E513
Metallothionein response to stress in rats: role in free radical scavenging J. Hidalgo, L. Campmany, M. Borras, J. S. Garvey, and A. Armario	E518
Pituitary-adrenal response to bacterial endotoxin in developing rats L. Witek-Janusek	E525
Multiple renin forms in the adrenal gland S. H. Kim, F. M. Sessler, and R. L. Malvin	E531
Acute inhibition of rat heart protein synthesis in vitro during β -adrenergic stimulation or hypoxia	
S. J. Fuller and P. H. Sugden	E537
Insulin responsiveness of protein metabolism in vivo following bedrest in humans R. E. Shangraw, C. A Stuart, M. J. Prince, E. J. Peters, and R. R. Wolfe	E548
Impact of sex steroids and their suppression on skeletal growth and maturation P. A. Boepple, M. J. Mansfield, K. Link, J. D. Crawford, J. F. Crigler, Jr., D. C. Kushner, R. M. Blizzard, and W. F. Crowley, Jr.	E559
Effect of prolactin on enzymes of lipid biosynthesis in mammary gland explants	
S. B. Waters and J. A. Rillema	E567

SPECIAL COMMUNICATIONS

No. 5. NOVEMBER 1988

ANF inhibits glucose-stimulated insulin secretion in mouse and rat B. Ahrén	E579
Differential effects of electrolytic and chemical hypothalamic lesions on LH pulses in rats	
C. L. Sisk, A. A. Nunez, and M. M. Thebert	E583
Furosemide reduces insulin release by inhibition of Cl ⁻ and Ca ²⁺ fluxes in β -cells $PE.$ Sandström and $J.$ Sehlin	E591
Adrenalectomy fails to stimulate brown adipose tissue metabolism in ob/ob mice fed glucose HK. Kim and D. R. Romsos	E597
Effects of thyroid hormone on Na ⁺ -K ⁺ transport in resting and stimulated rat skeletal muscle M. E. Everts and T. Clausen	E604
Calcitonin is a competitive inhibitor of the hydrosmotic effect of oxytocin in toad bladder	2001
M. Parisi, C. Ibarra, M. Ladizesky, and C. Mautalen	E613
Involvement of sympathetic nervous system and brown fat in endotoxin-induced fever in rats	Dose
M. M. Jepson, D. J. Millward, N. J. Rothwell, and M. J. Stock	E617
Mechanisms limiting glycogen storage in muscle during prolonged insulin stimulation E. A. Richter, S. A. Hansen, and B. F. Hansen	E621
Adrenergic blockade prevents endotoxin-induced increases in glucose metabolism D. M. Hargrove, G. J. Bagby, C. H. Lang, and J. J. Spitzer	E629
Heart rate control in diabetic rabbits: blunted response to isoproterenol B. E. Zola, B. Miller, G. L. Stiles, P. S. Rao, E. H. Sonnenblick, and F. S. Fein	E636
Importance of glycosylation for hepatic clearance of renal renin S. Kim, M. Hiruma, F. Ikemoto, and K. Yamamoto	E642
G protein in stimulation of PI hydrolysis by CCK in isolated rat pancreatic acinar cells T. Matozaki, C. Sakamoto, M. Nagao, H. Nishizaki, and S. Baba	E652
PTH elevates inositol polyphosphates and diacylglycerol in a rat osteoblast-like cell line R. Civitelli, I. R. Reid, S. Westbrook, L. V. Avioli, and K. A. Hruska	E660
Effects of epinephrine infusion on determinants of intravenous glucose tolerance in dogs I. K. Martin, K. M. Weber, R. C. Boston, F. P. Alford, and J. D. Best	E668
Maternal dehydration-rehydration: fetal plasma and urinary responses M. G. Ross, D. J. Sherman, M. G. Ervin, R. Castro, and J. Humme	E674
Response to deep hypoglycemia does not involve glucoreceptors in carotid perfused tissue	7.000
P. Cane, C. K. Haun, J. Evered, J. H. Youn, and R. N. Bergman	E680
Hydrocortisone secretion: production rate and pulse characterization by numerical deconvolution P. L. Toutain, M. Laurentie, A. Autefage, and M. Alvinerie	E688
Alterations of the hypothalamic GnRH interpulse interval sequence over the normal menstrual cycle	
N. Santoro, J. P. Butler, M. Filicori, and W. F. Crowley, Jr.	E696
Verapamil induces PTH resistance but increases duodenal calcium absorption in rats $J.\ Fox$	E702
Thermogenesis after lateral hypothalamic lesions: contributions of brown adipose tissue S. W. Corbett, L. N. Kaufman, and R. E. Keesey	E708
Regional differences in adipocyte lactate production from glucose F. D. Newby, M. N. Sykes, and M. DiGirolamo	E716
Rapid and transitory stimulation of 3-O-methylglucose transport by growth hormone C. Carter-Su, F. W. Rozsa, X. Wang, and J. R. Stubbart	E723
Regulation of $1,25(OH)_2D$ synthesis in hypoparathyroidism and pseudohypoparathyroidism	
N. A. Breslau and R. S. Weinstock	E730

	P. Arner, J. Bolinder, A. Eliasson, A. Lundin, and U. Ungerstedt	E737
	Precursors to glycogen in ovine fetuses L. L. Levitsky, J. B. Paton, and D. E. Fisher	E743
	ANNOUNCEMENTS	E748
No. 6. D	ECEMBER 1988	
	A novel general biophysical model for simulating episodic endocrine gland signaling J. D. Veldhuis and M. L. Johnson	E749
	Role of interleukin 1 and tumor necrosis factor on energy metabolism in rabbits E. E. Tredget, Y. M. Yu, S. Zhong, R. Burini, S. Okusawa, J. A. Gelfand, C. A. Dinarello, V. R. Young, and J. F. Burke	E760
	Rates and tissue sites of non-insulin- and insulin-mediated glucose uptake in humans A. D. Baron, G. Brechtel, P. Wallace, and S. V. Edelman	E769
	Evaluation of pulse-detection algorithms by computer simulation of hormone secretion V. Guardabasso, G. De Nicolao, M. Rocchetti, and D. Rodbard	E775
	Nonadrenergic sympathetic neural influences on basal pancreatic hormone secretion B. E. Dunning, B. Ahrén, R. C. Veith, and G. J. Taborsky, Jr.	E785
	Adrenergic control of renin in euhydrated and water-deprived conscious dogs YH. Chen, H. Hisa, K. J. Radke, J. L. Izzo, Jr., C. D. Sladek, and M. L. Blair	E793
	α-Adrenergic modulation of glutathione metabolism in isolated rat hepatocytes J. M. Estrela, F. Gil, J. M. Vila, and J. Viña	E801
	Effect of insulin on [3H]deoxy-D-glucose pharmacokinetics in the rat S. M. Furler, A. B. Jenkins, and E. W. Kraegen	E806
	Acidosis-induced glucose intolerance is not prevented by adrenergic blockade H. J. Adrogué, Z. Chap, Y. Okuda, L. Michael, C. Hartley, M. Entman, and J. B. Field	E812
	Exercise regulation of triiodothyronine metabolism H. L. Katzeff, D. Bovbjerg, and D. A. Mark	E824
	GHRF causes biphasic stimulation of SRIF secretion from rat hypothalamic cells S. Richardson, S. Twente, and T. Audhya	E829
	Abnormal regulation of cAMP accumulation in pancreatic islets of obese mice M. A. Black, H. M. C. Heick, and N. Bégin-Heick	E833
	Naloxone attenuates development of hypertension in two-kidney one-clip Goldblatt rats M. Chen, J. Lee, R. L. Malvin, and B. S. Huang	E839
	Glucose intolerance in thyrotoxic rats: role of insulin, glucagon, and epinephrine T. Ikeda, O. Mokuda, M. Tominaga, and H. Mashiba	E843
	Adrenalectomy eliminates both fiber-type differences and starvation effects on denervated muscle R. R. Almon and D. C. Dubois	E850
	Androgenic influences on body size and composition of adult rhesus monkeys J. W. Kemnitz, K. K. Sladky, T. J. Flitsch, S. M. Pomerantz, and R. W. Goy	E857
	Changes in GDP binding to brown adipose tissue mitochondria and the uncoupling protein A. G. Swick and R. W. Swick	E865
	Effect of isotope infusion and sampling sites on glucose kinetics during a euglycemic clamp F. Jahoor, S. Klein, H. Miyoshi, and R. R. Wolfe	E871
	Glucocorticoids and inhibition of bone formation induced by skeletal unloading B. P. Halloran, D. D. Bikle, C. M. Cone, and E. Morey-Holton	E875
	Neuropeptide Y mobilizes Ca ²⁺ and inhibits adenylate cyclase in human erythroleukemia cells H. J. Motulsky and M. C. Michel	E880
	Peripheral metabolism of PTH: fate of biologically active amino terminus in vivo F. R. Bringhurst, A. M. Stern, M. Yotts, N. Mizrahi, G. V. Segre and J. T. Potts, Jr.	E886

Regulation of plasma lipid transfer by the high-density lipoproteins J. H. Tollefson, A. Liu, and J. J. Albers	E894
Structure and function changes in rat adrenal glands during aging E. Reaven, M. Kostrna, J. Ramachandran, and S. Azhar	E903
Selective induction of high-ouabain-affinity isoform of Na ⁺ -K ⁺ -ATPase by thyroid hormone R. S. Haber and J. N. Loeb	E912
Relative contributions of the nervous system and hormones to CNS-mediated hyperglycemia A. Iguchi, M. Gotoh, H. Matsunaga, A. Yatomi, A. Honmura, M. Yanase, and N. Sakamoto	E912
Time-dependent involvement of autonomic nervous system in hyperglycemia due to 2-deoxy-D-glucose H. Yamamoto, K. Nagai, and H. Nakagawa	E920
Contribution of the kidney to metabolic clearance of atrial natriuretic peptide R. L. Woods	E934
No accumulation of glucose in human skeletal muscle during euglycemic hyperinsulinemia A. Katz, B. L. Nyomba, and C. Bogardus	E942
Interaction of carnitine with insulin-stimulated glucose metabolism in humans E. Ferrannini, G. Buzzigoli, S. Bevilacqua, C. Boni, D. Del Chiaro, M. Oleggini, L. Brandi, and F. Maccari	E946
RAPID COMMUNICATIONS	
Independent stimulation of glucose metabolism and Na $^+$ -K $^+$ exchange by insulin in the human forearm	
E. Ferrannini, S. Taddei, D. Santoro, A. Natali, C. Boni, D. Del Chiaro, and G. Buzzigoli	E953
ANNOUNCEMENTS	E959
Subject Index to Volume 18	E96

CORRIGENDA

E969

Volume 253, July 1987 Volume 16, July 1987

Author Index to Volume 18

Pages E45–E51: Ian R. Reid, Roberto Civitelli, Linda R. Halstead, Louis V. Avioli, and Keith R. Hruska. "Parathyroid hormone acutely elevates intracellular calcium in osteoblastlike cells." Page E45: in the abstract, the volume numbers were published incorrectly. The citation should read: Am. J. Physiol. 253 (Endocrinol. Metab. 16): E45–E51, 1987.

American Journal of Physiology: Gastrointestinal and Liver Physiology

No. 1. JULY 1988

	Effect of denervation on initiation and coordination of gastroduodenal motility in turkeys S. B. Chaplin and G. E. Duke	G1
	Release of secretin along the canine small intestine	
	M. Fried, A. S. Fink, L. R. DeSouza, C. Beglinger, K. Gyr, and J. H. Meyer Effects of intraluminal nutrients on intestinal myoelectric activity in rabbits	G7
	T. Bouyssou, M. Pairet, M. Candau, and Y. Ruckebusch	G12
	Norepinephrine induces Na*-H* and Cl*-HCO ₃ exchange in Amphiuma intestine: locus and response to amiloride J. F. White and C. F. Hinton	G18
	Activation of protein kinase C attenuates prostaglandin E ₂ responses in a colonic cell line	Con
	G. Warhurst, N. B. Higgs, M. Lees, A. Tonge, and L. A. Turnberg Caerulein causes translocation of protein kinase C in rat acini without increasing	G27
	cytosolic free Ca ²⁺	000
	R. Bruzzone, R. Regazzi, and C. B. Wollheim Immunoneutralization of somatostatin and neurotensin: effect on gastric acid secretion	G33
	A. Seal, E. Liu, A. Buchan, and J. Brown	G40
	Release of NPY in pig pancreas: dual parasympathetic and sympathetic regulation S. P. Sheikh, J. J. Holst, T. Skak-Nielsen, U. Knigge, J. Warberg, E. Theodorsson-Norheim, T. Hökfelt, J. M. Lundberg, and T. W. Schwartz	G46
	Mechanical properties and sensitivity to CCK of vagal gastric slowly adapting mechanoreceptors J. S. Davison and G. D. Clarke	G55
	Restitution of barrier and transport function of porcine colon after acute mucosal injury R. A. Argenzio, C. K. Henrikson, and J. A. Liacos	G62
	Age-related loss of nongoblet crypt cells parallels decreased secretion in rabbit descending colon B. Braaten, J. L. Madara, and M. Donowitz	G72
	Transport of guanidine in rabbit intestinal brush-border membrane vesicles	012
	Y. Miyamoto, V. Ganapathy, and F. H. Leibach	G85
	Antropyloroduoden 1 activity during gastric emptying of liquid meals in humans C. P. Dook y and J. E. Valenzuela	G93
	Carbamoylcholine and gastrin induce inositol lipid turnover in canine gastric parietal cells	
	T. Chiba, S. K. Fisher, J. Park, E. B. Seguin, B. W. Agranoff, and T. Yamada	G99
	Kinetics of binding of cholecystokinin to pancreatic acini S. A. Wank, R. T. Jensen, and J. D. Gardner	G106
	Functional somatostatin receptors on a rat pancreatic acinar cell line N. Viguerie, N. Tahiri-Jouti, JP. Esteve, P. Clerc, C. Logsdon, M. Svoboda, C. Susini, N. Vaysse, and A. Ribet	G113
	Hepatocyte cotransport of taurocholate and bilirubin glucuronides: role of microtubules J. M. Crawford and J. L. Gollan	G121
	Autoradiographic analysis of hepatocytes in mirex-induced adaptive liver growth D. Wilson and J. D. Yarbrough	G132
c	GUST 1988	

No. 2. AUGUST 1988

EDITORIAL

A new journal	
P. C. Johnson	G1

	Dietary regulation of intestinal transport of the dipeptide carnosine R. P. Ferraris, J. Diamond, and W. W. Kwan	G143
	Regulatory signals for intestinal amino acid transporters and peptidases R. P. Ferraris, W. W. Kwan, and J. Diamond	G151
	Involvement of endogenous opiates in regulation of gastric emptying of fat test meals in mice	
	J. Fioramonti, M. J. Fargeas, and L. Bueno	G158
	Neurohumoral control of villous motility W. A. Womack, D. Mailman, P. R. Kvietys, and D. N. Granger	G162
	Adenosine plays a role in food-induced jejunal hyperemia D. R. Sawmiller and C. C. Chou	G168
	Effect of sulfidopeptide leukotrienes D ₄ and E ₄ on ileal ion transport in vitro in the rat and rabbit P. L. Smith, D. P. Montzka, G. P. McCafferty,	
	M. A. Wasserman, and J. D. Fondacaro Synaptic behavior of myenteric neurons in guinea pig distal colon	G175
	P. R. Wade and J. D. Wood	G184
	A simple method for chronic cannulation of the portal vein in intact unrestrained rats A. Braillon and M. J. Brody	G191
	Continuous monitoring of portal vein and hepatic artery hemodynamics in unrestrained rats	
	A. Braillon and M. J. Brody Intestinal anaphylaxis: in vivo and in vitro studies of the rat proximal colon	G194
	D. Forbes, M. Patrick, M. Perdue, A. Buret, and D. G. Gall	G201
	Na ⁺ and H ⁺ transport in human jejunal brush-border membrane vesicles J. G. Kleinman, J. M. Harig, J. A. Barry, and K. Ramaswamy	G206
	Protein digestion in human and rat small intestine: role of new neutral endopeptidases D. Guan, M. Yoshioka, R. H. Erickson, W. Heizer, and Y. S. Kim	G212
	Agonist-sensitive calcium pool in the pancreatic acinar cell. I. Permeability properties S. Muallem, M. S. Schoeffield, C. J. Fimmel, and S. J. Pandol	G221
	Agonist-sensitive calcium pool in the pancreatic acinar cell. II. Characterization of reloading S. Muallem, M. S. Schoeffield, C. J. Fimmel, and S. J. Pandol	G229
	Changes in pattern of enzyme secretion by rat pancreas during repeated trypsin inhibitor treatment	Conc
	V. Keim, B. Göke, and G. Adler Cholecystokinin inhibits gastric motility and emptying via a capsaicin-sensitive vagal	G236
	pathway in rats H. E. Raybould and Y. Taché	G242
	Effect of pH on chloride absorption in the flounder intestine	C947
	A. N. Charney, J. I. Scheide, P. M. Ingrassia, and J. A. Zadunaisky Na ⁺ -glycine cotransport in canalicular liver plasma membrane vesicles R. H. Moseley, N. Ballatori, and S. M. Murphy	G247 G253
No. 3. SE	PTEMBER 1988	0200
	Characterization of a new CCK antagonist, L364,718: in vitro and in vivo studies	
	D. S. Louie, J. P. Liang, and C. Owyang Local control of mesenteric blood flow by the renin-angiotensin system	G261
	A. Suvannapura and N. R. Levens	G267
	Patch-clamp study of single-channel and whole-cell K+ currents in guinea pig pancreatic acinar cells	
	K. Suzuki and O. H. Petersen Active electrolyte transport in mammalian buccal mucosa	G275
	R. C. Orlando, N. A. Tobey, V. J. Schreiner, and R. D. Readling	G286
	Sodium-dependent D-glucose transport after proximal small intestinal resection in rat	C202

CNS regulation of gastric and autonomic functions in dogs by gastrin-releasing peptide H. J. Lenz	G298
Gastric mucosal ornithine decarboxylase: localization and stimulation by gastrin L. R. Johnson, CC. Tseng, U. R. Tipnis, and M. K. Haddox	G304
Stimulation of acid formation in permeable gastric glands by valinomycin S. J. Hersey and L. Steiner	G313
Physiological enteric stimulation elicits cardiovascular reflexes in the rat B. S. Pittam, W. R. Ewart, F. Appia, and D. L. Wingate	G319
Electrolyte transport in distal colon of sodium-depleted rats: effect of sodium repletion S. G. Turnamian and H. J. Binder	G329
Glucose enhancement of transcellular calcium transport in the intestine K. M. Carroll, R. J. Wood, E. B. Chang, and I. H. Rosenberg	G339
Sodium-proton exchanger in isolated hepatocytes exhibits a set point D. J. Stewart	G346
Inhibitory opioid receptors in canine pylorus HD. Allescher, S. Ahmad, E. E. Daniel, J. Dent, F. Kostolanska, and J. E. T. Fox	G352
Analysis of sequential events in intestinal absorption of folylpolyglutamate B. Darcy-Vrillon, J. Selhub, and I. H. Rosenberg	G361
Cl ⁻ -HCO ₃ antiport in rat lacrimal gland R. W. Lambert, M. E. Bradley, and A. K. Mircheff	G367
Role of terminal fucose residues in clearance of human glycosylated α -amylase S. E. Tollefsen and J. L. Rosenblum	G374
Effect of bile acid hydroxylation on biliary protoporphyrin excretion in rat liver M. M. Berenson, J. J. G. Marin, and C. Gunther	G382
Influence of purinoceptors' agonists and antagonists on opossum internal anal sphincter S. Rattan and R. Shah	G389
EDITORIAL REVIEW	
Experimental models of gastric ulceration and injury W. Silen	G395
Experimental models of gastric ulceration and injury W. Silen Effect of membrane potential and cellular ATP on glutathione efflux from isolated rat hepatocytes	
Experimental models of gastric ulceration and injury W. Silen Effect of membrane potential and cellular ATP on glutathione efflux from isolated rat hepatocytes J. C. Fernandez-Checa, C. Ren, T. Y. Aw, M. Ookhtens, and N. Kaplowitz Canine gallbladder cyclic motor activity	G403
Experimental models of gastric ulceration and injury W. Silen Effect of membrane potential and cellular ATP on glutathione efflux from isolated rat hepatocytes J. C. Fernandez-Checa, C. Ren, T. Y. Aw, M. Ookhtens, and N. Kaplowitz Canine gallbladder cyclic motor activity T. Matsumoto, S. K. Sarna, R. E. Condon, W. J. Dodds, and N. Mochinaga Ethanol-induced increase in portal blood flow: role of acetate and A ₁ -	
Experimental models of gastric ulceration and injury W. Silen Effect of membrane potential and cellular ATP on glutathione efflux from isolated rat hepatocytes J. C. Fernandez-Checa, C. Ren, T. Y. Aw, M. Ookhtens, and N. Kaplowitz Canine gallbladder cyclic motor activity T. Matsumoto, S. K. Sarna, R. E. Condon, W. J. Dodds, and N. Mochinaga Ethanol-induced increase in portal blood flow: role of acetate and A ₁ - and A ₂ -adenosine receptors F. J. Carmichael, V. Saldivia, G. A. Varghese, Y. Israel, and H. Orrego Pertussis toxin-sensitive cholinergic inhibition of somatostatin release	G403
Experimental models of gastric ulceration and injury W. Silen Effect of membrane potential and cellular ATP on glutathione efflux from isolated rat hepatocytes J. C. Fernandez-Checa, C. Ren, T. Y. Aw, M. Ookhtens, and N. Kaplowitz Canine gallbladder cyclic motor activity T. Matsumoto, S. K. Sarna, R. E. Condon, W. J. Dodds, and N. Mochinaga Ethanol-induced increase in portal blood flow: role of acetate and A ₁ - and A ₂ -adenosine receptors F. J. Carmichael, V. Saldivia, G. A. Varghese, Y. Israel, and H. Orrego Pertussis toxin-sensitive cholinergic inhibition of somatostatin release from canine D-cells C. B. Chan and A. H. Soll	G403 G409
Experimental models of gastric ulceration and injury W. Silen Effect of membrane potential and cellular ATP on glutathione efflux from isolated rat hepatocytes J. C. Fernandez-Checa, C. Ren, T. Y. Aw, M. Ookhtens, and N. Kaplowitz Canine gallbladder cyclic motor activity T. Matsumoto, S. K. Sarna, R. E. Condon, W. J. Dodds, and N. Mochinaga Ethanol-induced increase in portal blood flow: role of acetate and A ₁ - and A ₂ -adenosine receptors F. J. Carmichael, V. Saldivia, G. A. Varghese, Y. Israel, and H. Orrego Pertussis toxin-sensitive cholinergic inhibition of somatostatin release from canine D-cells	G403 G409 G417
Experimental models of gastric ulceration and injury W. Silen Effect of membrane potential and cellular ATP on glutathione efflux from isolated rat hepatocytes J. C. Fernandez-Checa, C. Ren, T. Y. Aw, M. Ookhtens, and N. Kaplowitz Canine gallbladder cyclic motor activity T. Matsumoto, S. K. Sarna, R. E. Condon, W. J. Dodds, and N. Mochinaga Ethanol-induced increase in portal blood flow: role of acetate and A ₁ - and A ₂ -adenosine receptors F. J. Carmichael, V. Saldivia, G. A. Varghese, Y. Israel, and H. Orrego Pertussis toxin-sensitive cholinergic inhibition of somatostatin release from canine D-cells C. B. Chan and A. H. Soll H*-dependent calcium uptake into an IP ₃ -sensitive calcium pool from rat parotid gland	G403 G409 G417 G424
Experimental models of gastric ulceration and injury W. Silen Effect of membrane potential and cellular ATP on glutathione efflux from isolated rat hepatocytes J. C. Fernandez-Checa, C. Ren, T. Y. Aw, M. Ookhtens, and N. Kaplowitz Canine gallbladder cyclic motor activity T. Matsumoto, S. K. Sarna, R. E. Condon, W. J. Dodds, and N. Mochinaga Ethanol-induced increase in portal blood flow: role of acetate and A ₁ - and A ₂ -adenosine receptors F. J. Carmichael, V. Saldivia, G. A. Varghese, Y. Israel, and H. Orrego Pertussis toxin-sensitive cholinergic inhibition of somatostatin release from canine D-cells C. B. Chan and A. H. Soll H*-dependent calcium uptake into an IP ₃ -sensitive calcium pool from rat parotid gland F. Thèvenod and I. Schulz Characteristics of canine lower esophageal sphincter: a new electrophysiological tool	G403 G409 G417 G424 G429
Experimental models of gastric ulceration and injury W. Silen Effect of membrane potential and cellular ATP on glutathione efflux from isolated rat hepatocytes J. C. Fernandez-Checa, C. Ren, T. Y. Aw, M. Ookhtens, and N. Kaplowitz Canine gallbladder cyclic motor activity T. Matsumoto, S. K. Sarna, R. E. Condon, W. J. Dodds, and N. Mochinaga Ethanol-induced increase in portal blood flow: role of acetate and A ₁ - and A ₂ -adenosine receptors F. J. Carmichael, V. Saldivia, G. A. Varghese, Y. Israel, and H. Orrego Pertussis toxin-sensitive cholinergic inhibition of somatostatin release from canine D-cells C. B. Chan and A. H. Soll H+-dependent calcium uptake into an IP ₃ -sensitive calcium pool from rat parotid gland F. Thèvenod and I. Schulz Characteristics of canine lower esophageal sphincter: a new electrophysiological tool H. D. Allescher, I. Berezin, J. Jury, and E. E. Daniel Hormonal regulation of hepatocyte tight junctional permeability	G403 G409 G417 G424 G429 G441
Experimental models of gastric ulceration and injury W. Silen Effect of membrane potential and cellular ATP on glutathione efflux from isolated rat hepatocytes J. C. Fernandez-Checa, C. Ren, T. Y. Aw, M. Ookhtens, and N. Kaplowitz Canine gallbladder cyclic motor activity T. Matsumoto, S. K. Sarna, R. E. Condon, W. J. Dodds, and N. Mochinaga Ethanol-induced increase in portal blood flow: role of acetate and A ₁ - and A ₂ -adenosine receptors F. J. Carmichael, V. Saldivia, G. A. Varghese, Y. Israel, and H. Orrego Pertussis toxin-sensitive cholinergic inhibition of somatostatin release from canine D-cells C. B. Chan and A. H. Soll H*-dependent calcium uptake into an IP ₃ -sensitive calcium pool from rat parotid gland F. Thèvenod and I. Schulz Characteristics of canine lower esophageal sphincter: a new electrophysiological tool H. D. Allescher, I. Berezin, J. Jury, and E. E. Daniel Hormonal regulation of hepatocyte tight junctional permeability P. J. Lowe, K. Miyai, J. H. Steinbach, and W. G. M. Hardison [3H]saxitoxin as a marker for canine deep muscular plexus neurons	G403 G409 G417 G424 G429 G441 G454

	Characterization of calcium transport by basolateral membrane vesicles of human small intestine K. Kikuchi, T. Kikuchi, and F. K. Ghishan	G482
	Topography and measurement of pyloric pressure waves and tone in humans R. Heddle, J. Dent, J. Toouli, and N. W. Read	G490
	Cholecystokinin in the regulation of intestinal motility and pancreatic secretion in dogs	
	P. Thor, J. Laskiewicz, P. Konturek, and S. J. Konturek Motility effects of intestinal anaphylaxis in the rat R. B. Scott, S. C. Diamant, and D. G. Gall	G498 G505
	Cholecystokinin receptors on gallbladder muscle and pancreatic acinar cells: a comparative study T. von Schrenk, T. H. Moran, P. Heinz-Erian, J. D. Gardner, and R. T. Jensen	G512
	Postprandial celiac and superior mesenteric blood flows in conscious dogs T. Takagi, S. Naruse, and S. Shionoya	G522
	SPECIAL COMMUNICATIONS	_
	Quantitative measurement of feline colonic transit B. Krevsky, M. B. Somers, A. H. Maurer, L. S. Malmud, L. C. Knight, and R. S. Fisher	G529
No. 5. N	OVEMBER 1988	
	Role of pancreatic polypeptide in the regulation of pancreatic exocrine secretion in dogs K. Shiratori, K. Y. Lee, TM. Chang, Y. H. Jo, D. H. Coy, and W. Y. Chey	G535
	Role of glucagon in intestinal hyperemia associated with early experimental diabetes mellitus L. F. Yrle, J. K. Smith, J. N. Benoit, D. N. Granger, and R. J. Korthuis	G542
	Hepatic efflux of glutathione by the perfused rat liver: role of membrane potential difference T. L. Wright, J. G. Fitz, and T. D. Boyer	G547
	SOD prevents damage and attenuates eicosanoid release in a rabbit model of necrotizing enterocolitis M. J. S. Miller, H. McNeill, K. M. Mullane, S. J. Caravella, and D. A. Clark	G556
	Ketocyclazocine, a κ -opioid receptor agonist, and control of intestinal myoelectric activity in dogs	G566
	G. L. Telford, A. Caudill, R. E. Condon, and J. H. Szurszewski Effect of methylene blue and N-ethylmaleimide on internal anal sphincter relaxation C. Moummi and S. Rattan	G571
	Affinity labeling the bovine gallbladder cholecystokinin receptor using a battery of probes B. Schjoldager, S. P. Powers, and L. J. Miller	G579
	Esophageal responses to transient and sustained esophageal distension W. G. Paterson, S. Rattan, and R. K. Goyal	G587
	Gastrin secretion by gastrinoma cells in long-term culture L. Elouaer-Blanc, I. Sobhani, P. Ruszniewski, M. Duet, T. Lehy, M. Mignon, S. Bonfils, and M. J. M. Lewin	G596
	Differential localization of 5-HT ₁ receptors on myenteric and submucosal neurons J. J. Galligan, A. Surprenant, M. Tonini, and R. A. North	G603
	Absorption and metabolism of orally fed arachidonic and linoleic acid in the rat Å. Nilsson and T. Melin	G612
	Control mechanisms of sphincter of Oddi contraction rate in the opossum T. Suzuki, W. J. Dodds, S. K. Sarna, W. J. Hogan, R. A. Komorowski, and Z. Itoh	G619
	Role of Ca ²⁺ in bombesin-stimulated release of gastrin and somatostatin from isolated perfused rat stomach	G627
	YS. Guo, J. C. Thompson, and P. Singh Radiographic analysis of the effect of dietary fibers on rat colonic transit time J. R. Lupton and M. M. Meacher	G633

C. F. Hinton and J. F. White	G640
Functional gradients in muscle cells isolated from gallbladder, cystic duct,	0010
and common bile duct C. Severi, J. R. Grider, and G. M. Makhlouf	G647
Culture behavior of healthy bovine gallbladder muscularis smooth muscle cells D. Sas and L. J. Miller	G653
Manometric investigation of high-amplitude propagated contractile activity of the human colon	
G. Bassotti and M. Gaburri Corelease of amidated and glycine-extended antral gastrins after a meal	G660
L. Hilsted and C. P. Hansen Pancreatic growth after partial resection of normal and enlarged pancreas	G665
in rats fed soya flour P. S. Oates and R. G. H. Morgan	G670
Metabolism of gastrin and cholecystokinin by endopeptidase 24.11 from the pig stomach N. W. Bunnett, H. T. Debas, A. J. Turner, R. Kobayashi, and J. H. Walsh	G676
Action of the cholecystokinin antagonist L364,718 on gastric emptying in the rat T. Green, R. Dimaline, S. Peikin, and G. J. Dockray	G685
Intestinal microvascular exchange during lipid absorption D. N. Granger, R. J. Korthuis, P. R. Kvietys, and P. Tso	G690
SPECIAL COMMUNICATIONS	
Methodological errors in radioisotope flux measurements R. W. Egnor, S. G. Vaccarezza, and A. N. Charney	G696
ANNOUNCEMENTS	G700
No. 6. DECEMBER 1988	
Antigen-induced contraction of jejunal smooth muscle in the sensitized rat D. L. Vermillion, P. B. Ernst, R. Scicchitano, and S. M. Collins	G701
Splanchnic nerve stimulation inhibits duodenal HCO_3^- secretion in the rat $C.$ Jönson and $L.$ Fändriks	G709
Role of bicarbonate in biliary excretion of diisothiocyanostilbene disulfonate	
M. S. Anwer, K. Nolan, and W. G. M. Hardison	G713
	G713 G723
M. S. Anwer, K. Nolan, and W. G. M. Hardison Effect of immunization with prostaglandin metabolites on gastrointestinal ulceration	
 M. S. Anwer, K. Nolan, and W. G. M. Hardison Effect of immunization with prostaglandin metabolites on gastrointestinal ulceration J. S. Redfern, E. Lez, and M. Feldman Role of arachidonic acid metabolites in ethanol vasoaction in rat gastric submucosa 	G723
 M. S. Anwer, K. Nolan, and W. G. M. Hardison Effect of immunization with prostaglandin metabolites on gastrointestinal ulceration J. S. Redfern, E. Lez, and M. Feldman Role of arachidonic acid metabolites in ethanol vasoaction in rat gastric submucosa Y. Yonei, H. Wayland, and P. H. Guth Internalization and cellular processing of cholecystokinin in rat pancreatic acinar cells 	G723 G731
 M. S. Anwer, K. Nolan, and W. G. M. Hardison Effect of immunization with prostaglandin metabolites on gastrointestinal ulceration J. S. Redfern, E. Lez, and M. Feldman Role of arachidonic acid metabolites in ethanol vasoaction in rat gastric submucosa Y. Yonei, H. Wayland, and P. H. Guth Internalization and cellular processing of cholecystokinin in rat pancreatic acinar cells R. S. Izzo, C. Pellecchia, and M. Praissman Biliary secretion of organic anions in the dog: association with defined lipid particles S. Tazuma, R. L. Barnhart, L. E. Reeve, H. Tokumo, and R. T. Holzbach Reflex sympathetic activation in humans is accompanied by inhibition of gastric HCO₃ secretion 	G723 G731 G738 G745
 M. S. Anwer, K. Nolan, and W. G. M. Hardison Effect of immunization with prostaglandin metabolites on gastrointestinal ulceration J. S. Redfern, E. Lez, and M. Feldman Role of arachidonic acid metabolites in ethanol vasoaction in rat gastric submucosa Y. Yonei, H. Wayland, and P. H. Guth Internalization and cellular processing of cholecystokinin in rat pancreatic acinar cells R. S. Izzo, C. Pellecchia, and M. Praissman Biliary secretion of organic anions in the dog: association with defined lipid particles S. Tazuma, R. L. Barnhart, L. E. Reeve, H. Tokumo, and R. T. Holzbach Reflex sympathetic activation in humans is accompanied by inhibition 	G723 G731 G738
M. S. Anwer, K. Nolan, and W. G. M. Hardison Effect of immunization with prostaglandin metabolites on gastrointestinal ulceration J. S. Redfern, E. Lez, and M. Feldman Role of arachidonic acid metabolites in ethanol vasoaction in rat gastric submucosa Y. Yonei, H. Wayland, and P. H. Guth Internalization and cellular processing of cholecystokinin in rat pancreatic acinar cells R. S. Izzo, C. Pellecchia, and M. Praissman Biliary secretion of organic anions in the dog: association with defined lipid particles S. Tazuma, R. L. Barnhart, L. E. Reeve, H. Tokumo, and R. T. Holzbach Reflex sympathetic activation in humans is accompanied by inhibition of gastric HCO ₃ secretion H. Sjövall, H. Forssell, J. Häggendal, and L. Olbe Patterns of fast synaptic cholinergic activation of neurons in the celiac ganglia of cats	G723 G731 G738 G745
 M. S. Anwer, K. Nolan, and W. G. M. Hardison Effect of immunization with prostaglandin metabolites on gastrointestinal ulceration J. S. Redfern, E. Lez, and M. Feldman Role of arachidonic acid metabolites in ethanol vasoaction in rat gastric submucosa Y. Yonei, H. Wayland, and P. H. Guth Internalization and cellular processing of cholecystokinin in rat pancreatic acinar cells R. S. Izzo, C. Pellecchia, and M. Praissman Biliary secretion of organic anions in the dog: association with defined lipid particles S. Tazuma, R. L. Barnhart, L. E. Reeve, H. Tokumo, and R. T. Holzbach Reflex sympathetic activation in humans is accompanied by inhibition of gastric HCO₃ secretion H. Sjövall, H. Forssell, J. Häggendal, and L. Olbe Patterns of fast synaptic cholinergic activation of neurons in the celiac ganglia of cats J. P. Niel, N. Clerc, and Y. Jule Histamine H₂ receptor stimulation increases gastric emptying in monkeys 	G723 G731 G738 G745 G752 G759
 M. S. Anwer, K. Nolan, and W. G. M. Hardison Effect of immunization with prostaglandin metabolites on gastrointestinal ulceration J. S. Redfern, E. Lez, and M. Feldman Role of arachidonic acid metabolites in ethanol vasoaction in rat gastric submucosa Y. Yonei, H. Wayland, and P. H. Guth Internalization and cellular processing of cholecystokinin in rat pancreatic acinar cells R. S. Izzo, C. Pellecchia, and M. Praissman Biliary secretion of organic anions in the dog: association with defined lipid particles S. Tazuma, R. L. Barnhart, L. E. Reeve, H. Tokumo, and R. T. Holzbach Reflex sympathetic activation in humans is accompanied by inhibition of gastric HCO₃ secretion H. Sjövall, H. Forssell, J. Häggendal, and L. Olbe Patterns of fast synaptic cholinergic activation of neurons in the celiac ganglia of cats J. P. Niel, N. Clerc, and Y. Jule Histamine H₂ receptor stimulation increases gastric emptying in monkeys A. Dubois, D. Nompleggi, and D. O. Castell Physiological, morphological, and histochemical properties of cat external anal sphincte 	G723 G731 G738 G745 G752 G759 G767

On-line computer analysis of human lower esophageal sphincter relaxation J. A. Castell, C. B. Dalton, and D. O. Castell	
Effect of ileal infusion of lipid on jejunal motor patterns after a nutrient and nonnutrient meal I. McL. Welch, P. A. Davison, J. Worlding, and N. W. Read	G800
Effect of prostaglandin E ₂ on rabbit colonic smooth muscle cell contraction H. W. Kao, P. E. Hyman, S. E. Finn, and W. J. Snape, Jr.	G807
Neurotensin stimulates growth of small intestine in rats J. G. Wood, H. D. Hoang, L. J. Bussjaeger, and T. E. Solomon	G813
RAPID COMMUNICATIONS	
Effects of cholecystokinin on pancreatic ornithine decarboxylase gene expression S. Rosewicz, L. D. Lewis, R. A. Liddle, and C. D. Logsdon	G818
Sex differences in membrane potential in the intact perfused rat liver $R.\ A.\ Weisiger\ and\ J.\ G.\ Fitz$	G822
ANNOUNCEMENTS	G826
Subject Index to Volume 18	G827
Author Index to Volume 18	G833

American Journal of Physiology: Heart and Circulatory Physiology

Trigeminalectomy modifies pial arteriolar responses to hypertension or norepinephrine M. A. Moskowitz, E. P. Wei, K. Saito, and H. A. Kontos	H1
Ionic basis of depressed automaticity and conduction by acetylcholine in rabbit AV node M. Nishimura, Y. Habuchi, S. Hiromasa, and Y. Watanabe	H 7
Excretion of prostacyclin and thromboxane \mathbf{A}_2 metabolites during leg exercise in humans $\mathring{A}.$ Wennmalm and $G.$ A. Fitzgerald	H15
Effects of altered left atrial pressure on pulmonary vascular pressure-flow relationships J. Ducas, U. Schick, L. Girling, and R. M. Prewitt	H19
Effects of ischemia on cardiac afferent sympathetic and vagal reflexes in dog H. Inoue, B. T. Skale, and D. P. Zipes	H26
Increased response of brachial artery diameter to norepinephrine in hypertensive patients S. Laurent, L. Juillerat, G. M. London, J. Nussberger, H. Brunner, and M. E. Safar	H36
Evaluation of whole body autoregulation in conscious dogs P. J. Metting, J. R. Strader, and S. L. Britton	H44
Hypoxanthine and lactate concentrations in lambs during hypoxic and stagnant hypoxia M. Moss, S. Kurzner, Y. Razlog, and G. Lister	H53
The stunned myocardium: effect of electrical and mechanical arrest and osmolarity W. G. Nayler, J. S. Elz, and D. J. Buckley	H60
Effects of arginine vasopressin on cerebral microvascular pressure F. M. Faraci, W. G. Mayhan, P. G. Schmid, and D. D. Heistad	H70
Circulatory and metabolic responses to carbon monoxide hypoxia during β-adrenergic blockade M. J. Melinyshyn, S. M. Cain, S. M. Villeneuve, and C. K. Chapler	H77
Quantification of regional myocardial dysfunction after acute ischemic injury D. D. Glower, J. A. Spratt, J. S. Kabas, J. W. Davis, and J. S. Rankin	H85
Parathyroid hormone effects on skeletal exchangeable calcium and bone blood flow G. W. Brindley, E. A. Williams, J. T. Bronk, T. H. Meadows, R. J. Montgomery, S. R. Smith, and P. J. Kelly	H94
Age-related changes in composition and Ca ²⁺ -binding capacity of canine cortical bone extracts M. R. Pinto, J. P. Gorski, J. T. Penniston, and P. J. Kelly	H101
Contractile force of single heart cells compared with muscle strips of frog ventricle L. Tung and M. Morad	H111
Effect of local tissue cooling on microvascular smooth muscle and postjunctional α_2 -adrenoceptors	
J. E. Faber Elevated ambient oxygen does not affect autoregulation in cat mesentery	H121
D. J. Lang and P. C. Johnson Quantitative identification of superoxide anion as a negative inotropic species	H131
G. M. Schrier and M. L. Hess Acute saline loading in normal and bilaterally atrial-resected conscious dogs	H138
A. W. Cowley, Jr., P. R. Anderas, and M. M. Skelton Synergistic effects of LTC ₄ and TxA ₂ on coronary flow and myocardial function	H144
W. W. Nichols, J. L. Mehta, L. Thompson, and W. H. Donnelly Regulation of cholesterol metabolism in fetal rabbit aorta: role of amniotic fluid factors	H153
Z. Rymaszewski, R. L. Yunker, M. Ashraf, M. Park, and M. T. R. Subbiah Effects of L-propionylcarnitine on mechanical recovery during reflow in intact hearts	H160
A. J. Liedtke, L. DeMaison, and S. H. Nellis	H169

	Effect of naloxone and ibuprofen on organ blood flow during endotoxic shock in pig M. K. Nishijima, M. J. Breslow, C. F. Miller, and R. J. Traystman	H177
	Activation of dehydrogenase activity and cardiac respiration: a ³¹ P-NMR study L. A. Katz, A. P. Koretsky, and R. S. Balaban	H185
	Intracellular pH and inorganic phosphate content of heart in vivo: a ³¹ P-NMR study L. A. Katz, J. A. Swain, M. A. Portman, and R. S. Balaban	H189
	SPECIAL COMMUNICATIONS	
	Ventricular ejection fractions of linear transformation and ellipsoid models J. M. Wattenbarger, G. H. Templeton, G. B. Seibert, M. Ramanathan, S. S. Cassidy, and R. L. Johnson, Jr.	H197
	RAPID COMMUNICATIONS	
	Allopurinol does not enhance antioxidant properties of extracellular fluid B. J. Zimmerman, D. A. Parks, M. B. Grisham, and D. N. Granger	H202
	Nitric oxide, ACh, and electrical and mechanical properties of canine arterial smooth muscle K. Komori, R. R. Lorenz, and P. M. Vanhoutte	H207
	Is superoxide demonstration by electron-spin resonance spectroscopy really superoxide? H. Nakazawa, K. Ichimori, Y. Shinozaki, H. Okino, and S. Hori	H213
No. 2. A	UGUST 1988	
	EDITORIAL	
	A new journal P. C. Johnson	H217
	Bradykinin-stimulated calcium influx in cultured bovine aortic endothelial cells W. P. Schilling, A. K. Ritchie, L. T. Navarro, and S. G. Eskin	H219
	Forward diastolic flow in pulmonary artery induced by right atrial contraction of pig hearts	TTOOO
	Ø. A. Vengen, Ø. Ellingsen, and A. Ilebekk Red cell velocity during functional hyperemia: implications for rheology and oxygen transport	H228
	R. L. Hester and B. R. Duling Effect of sodium intake on gene expression and plasma levels of ANF in rats	H236
	A. L. Lattion, J. F. Aubert, J. P. Flückiger, J. Nussberger, B. Waeber, and H. R. Brunner	H245
	α ₂ -Adrenoceptor activity exerts dual control of coronary blood flow in canine coronary artery M. Hori, M. Kitakaze, J. Tamai, Y. Koretsune, K. Iwai, K. Iwakura, T. Kagiya, A. Kitabatake, M. Inoue, and T. Kamada	H250
	Direct cardiac effects of vasopressin: role of V ₁ - and V ₂ -vasopressinergic receptors B. R. Walker, M. E. Childs, and E. M. Adams	H261
	Influence of dehydration on locally mediated hindlimb vasodilation in baboons R. M. Thornton and D. W. Proppe	H266
	Hyperresponsiveness of arterial rings induced by renal prehypertensive rabbit plasma D. E. Dostal, J. A. Johnson, P. B. Langevin, and N. Abas	H272
	Pump perfusion abolishes autoregulation possibly via prostaglandin release P. Borgdorff, P. Sipkema, and N. Westerhof	H280
	Excitatory cholinergic innervation in canine portal and mesenteric veins K. Yoshioka, T. Furuta, A. Hayakawa, N. Ishikawa, and T. Shigei	H288
	Acute hypoxemia stimulates atrial natriuretic factor secretion in vivo A. J. Baertschi, J. M. Adams, and M. P. Sullivan	H295

	Augmentation of contraction in remote nonischemic zone during acute ischemia S. Noma, A. D. Askenase, W. S. Weintraub, L. W. Klein,	
	J. B. Agarwal, and R. H. Helfant	H301
	Effects of neuropeptides on heart rate in dogs: comparison of VIP, PHI, NPY, CGRP, and NT D. F. Rigel	H311
	Cardioprotective actions of thromboxane receptor antagonism in ischemic atherosclerotic rabbits	
	J. A. Osborne and A. M. Lefer Efficiency and capacity of protein synthesis are increased in pressure overload cardiac hypertrophy	H318
	R. Nagai, R. B. Low, W. S. Stirewalt, N. R. Alpert, and R. Z. Litten Pulmonary vascular reactivity to biogenic amines during acute hypoxia R. J. Porcelli and M. V. Cutaia	H325 H329
	Inotropic responses change during postnatal maturation in rabbit M. Artman, P. A. Kithas, J. S. Wike, and S. J. Strada	H335
	Hyperthermia increases cerebral metabolic rate and blood flow in neonatal pigs D. W. Busija, C. W. Leffler, and M. Pourcyrous	H343
	Relation between cytosolic free calcium and respiratory rates in cardiac myocytes R. Moreno-Sánchez and R. G. Hansford	H347
	Sympathetic activation induces asynchronous contraction in awake dogs with regional denervation	
	D. R. Knight, YT. Shen, J. X. Thomas, Jr., W. C. Randall, and S. F. Vatner Similar normalized E_{\max} and O_2 consumption-pressure-volume area relation	H358
	in rabbit and dog Y. Goto, B. K. Slinker, and M. M. LeWinter	H366
	Reabsorption kinetics of albumin from pleural space of dogs M. Miniati, J. C. Parker, M. Pistolesi, J. T. Cartledge, D. J. Martin, C. Giuntini, and A. E. Taylor	H375
	Role of adenosine in noradrenergic neurotransmission CJ. Kuan and E. K. Jackson	H386
	SPECIAL COMMUNICATIONS	
	Accuracy of volume measurement of rabbit left ventricle by balloon method Y. Goto, B. K. Slinker, and M. M. LeWinter	H394
	RAPID COMMUNICATIONS	
	Kinins induce abnormal vascular reactivity E. F. Ellis, S. A. Holt, E. P. Wei, and H. A. Kontos	H397
	Postischemic generation of superoxide anion by newborn pig brain W. M. Armstead, R. Mirro, D. W. Busija, and C. W. Leffler	H401
No. 3. S	EPTEMBER 1988	
	Role of calcium and protein kinase C in ANP secretion by cultured rat cardiocytes H. Matsubara, Y. Hirata, H. Yoshimi, S. Takata, Y. Takagi, Y. Umeda, Y. Yamane, and M. Inada	H405
	Ca-activated K channel in cultured smooth muscle cells of rat aortic media JI. Sadoshima, N. Akaike, H. Tomoike, H. Kanaide, and M. Nakamura	H410
	Chloralose alters circulatory response to α -receptor stimulation and blockade R. F. Covert, W. H. Drummond, and P. A. Gimotty	H419
	Adrenergic and histaminergic neural interactions in dog paws C. H. Baker, D. L. Davis, E. T. Sutton, and B. G. Lindsey	H426
	Pulmonary vascular response to platelet-activating factor in conscious sheep T. Toyofuku, T. Kobayashi, S. Koyama, and S. Kusama	H434
	Properties and subcellular localization of myocardial fatty acyl-coenzyme A oxidase E. H. Harrison and M. Walusimbi-Kisitu	H441

Enhanced release of endothelium-derived factor(s) by chronic increases in blood flow V. M. Miller and P. M. Vanhoutte	H446
Sympathetic changes during development of cardiac hypertrophy in aortic- constricted rats F. M. Siri	III
Coupling of albumin flux to volume flow in skin and muscles of anesthetized rats	H452
E. M. Renkin, M. Gustafson-Sgro, and L. Sibley Myocardial sarcolemma in ischemia: a quantitative freeze-fracture study	H458
J. S. Frank, S. Beydler, N. Wheeler, and K. I. Shine Changes in coronary pressure-flow relation after transition from blood	H467
to Tyrode perfusion L. C. Van Dijk, R. Krams, P. Sipkema, and N. Westerhof	H476
Support of arterial blood pressure by major pressor systems in conscious dogs P. H. Brand, P. J. Metting, and S. L. Britton	H483
Superior vena caval pressure elevation causes pleural effusion formation in sheep S. J. Allen, G. A. Laine, R. E. Drake, and J. C. Gabel	H492
Serotonergic mechanisms mediate renal sympathoinhibition during severe hemorrhage in rats	
D. A. Morgan, P. Thoren, E. A. Wilczynski, R. G. Victor, and A. L. Mark	H496
Baroreflex modulation of heart rate and initiation of atrial activation in dogs R. B. Schuessler, T. E. Canavan, J. P. Boineau, and J. L. Cox	H503
Constriction of lymphatics by catecholamines, carotid occlusion, or hemorrhage J. M. Dabney, M. J. Buehn, and D. E. Dobbins	H514
Responses to coronary artery occlusion in conscious dogs	
with selective cardiac denervation YT. Shen, D. R. Knight, S. F. Vatner, W. C. Randall, and J. X. Thomas, Jr.	H525
Supersensitivity to acetylcholine of canine sinus and AV nodes after parasympathetic denervation S. Kaseda and D. P. Zipes	H534
Fast inward current properties of voltage-clamped ventricular cells of embryonic chick heart	H540
H. Sada, M. Kojima, and N. Sperelakis Adenosine and hypoxia stimulate proliferation and migration of endothelial cells	11340
C. J. Meininger, M. E. Schelling, and H. J. Granger	H554
Sympathetic regulation of cerebral blood flow during seizures in newborn lambs C. D. Kurth, L. C. Wagerle, and M. Delivoria-Papadopoulos	H563
Pentobarbital anesthesia modifies pulmonary vasoregulation after hypoperfusion B. B. Chen, D. P. Nyhan, H. M. Goll, P. W. Clougherty, D. M. Fehr, and P. A. Murray	H569
Time course of sympathetic denervation supersensitivity in canine ventricular recovery	11000
J. B. Martins Evaluation of right and left ventricular size in SHR-Wistar hybrids	H577
A. O. Grassi de Gende	H587
Long-term hypotensive effect of β-agonist in conscious dogs B. S. Nuwayhid, D. B. Young, U. Tipayamontri, and JP. Montani	H592
Desensitization of myocardial but not coronary VIP receptor-mediated responses in dogs F. L. Anderson, A. C. Kralios, R. Hershberger, and M. R. Bristow	H601
Amiloride enhances postischemic ventricular recovery: possible role of Na $^+$ -H $^+$ exchange $M.\ Karmazyn$	H608
Atrial natriuretic factor-induced vasodepression occurs through central nervous system E. R. Levin, M. A. Weber, and S. Mills	H616
Perfused microvascular morphometry during middle cerebral artery occlusion	
E. Buchweitz-Milton and H. R. Weiss Dynamic fluid redistribution in hyperosmotic resuscitation of hypovolemic hemorrhage	H623
M. C. Mazzoni, P. Borgström, KE. Arfors, and M. Intaglietta	H629
Effect of albumin on the width of water channels in venous endothelium P. Sanabria and F. F. Vargas	H638

	Increased angiotensin II receptors in brain nuclei of DOCA-salt hypertensive rats J. S. Gutkind, M. Kurihara, and J. M. Saavedra	H646
	Granulocyte-platelet interactions and platelet fibrinogen receptor exposure E. Kornecki, Y. H. Ehrlich, R. Egbring, M. Gramse, R. Seitz, A. Eckardt, H. Lukasiewicz, and S. Niewiarowski	H651
	SPECIAL COMMUNICATIONS	
	Separation of cardiac myosin heavy chains by gradient SDS-PAGE K. A. Esser, M. O. Boluyt, and T. P. White	H659
	MODELING METHODOLOGY FORUM	
	Estimation of intramyocardial pressure and coronary blood flow distribution Y. Sun and H. Gewirtz	H664
	RAPID COMMUNICATIONS	
	Pulsatile sinus pressure changes evoke sustained baroreflex responses in awake dogs $D.$ Mendelowitz and $A.$ M. Scher	H673
	Interrelation between end-systolic pressure-volume and pressure-wall thickness relations J. D. Schipke, J. Alexander, Jr., Y. Harasawa, R. Schulz, and D. Burkhoff	H679
	Reflex activation of sympathetic nervous system by ANF in humans $T.\ J.\ Ebert$	H685
	LETTERS TO THE EDITOR	
	Acetylcholine to measure total vascular pressure-volume relationship C. F. Rothe; R. W. Lee and S. Goldman	H690
	Pulmonary artery catheterization in the rat SW. Chang, K. G. Morris, I. F. McMurtry, and N. F. Voelkel; B. Biber	H691
No. 4. OC	CTOBER 1988	
	Vascular vasopressin receptors in renal hypertensive rats R. Larivière, J. St-Louis, and E. L. Schiffrin	H693
	Inotropic sensitivity to β-adrenergic stimulation in early sepsis L. W. Smith and K. H. McDonough	H699
	Changes in AdSNA and arterial catecholamines to coronary occlusion in cats T. Honda and I. Ninomiya	H704
	Lipoxygenase inhibitors block O_2 responses of hamster cheek pouch arterioles $W.\ F.\ Jackson$	H711
	Dexamethasone attenuates reversal of hypertension in one-kidney, one-clip rats H. M. McGowan, R. Vandongen, and B. Smith	H717
	α -Subunit of G_8 directly activates cardiac calcium channels in lipid bilayers Y. Imoto, A. Yatani, J. P. Reeves, J. Codina, L. Birnbaumer, and A. M. Brown	H722
	NE turnover in genetically hypertensive rats of Lyon strain. I. Brain nuclei M. Sautel, J. Sacquet, M. Vincent, and J. Sassard	H729
	NE turnover in genetically hypertensive rats of Lyon strain. II. Peripheral organs M. Sautel, J. Sacquet, M. Vincent, and J. Sassard	H736
	Assessment of Windkessel as a model of aortic input impedance D. Burkhoff, J. Alexander, Jr., and J. Schipke	H742
	Cyclic AMP modulates Ca-activated K channel in cultured smooth muscle cells of rat aortas	
	JI. Sadoshima, N. Akaike, H. Kanaide, and M. Nakamura Venomotor responses during central and local hypoxia	H754
	L. B. Rowell and J. R. Blackmon Free radicals inhibit endothelium-dependent dilation in the coronary resistance bed	H760
	D. J. Stewart II Pohl and F. Bassense	H765

Properties of single gap junctional channels between isolated neonatal rat heart cells M. B. Rook, H. J. Jongsma, and A. C. G. van Ginneken	H770
Endothelium-dependent pressure-induced contraction of isolated canine carotid arteries	11110
G. M. Rubanyi	H783
Activity of in vivo canine cardiac plexus neurons M. Gagliardi, W. C. Randall, D. Bieger, R. D. Wurster, D. A. Hopkins, and J. A. Armour	H789
Effects of 10- to 12-day treatment with L-thyroxine in rats with myocardial infarction R. G. Gay, S. Graham, M. Aguirre, S. Goldman, and E. Morkin	H801
No significant increase in O ₂ consumption of KCl-arrested dog heart with filling and dobutamine	*****
T. Nozawa, Y. Yasumura, S. Futaki, N. Tanaka, and H. Suga Regional hemodynamic responses to adrenoceptor antagonism in conscious rats	H807
S. M. Gardiner and T. Bennett	H813
Oxygen free radicals abolish endothelium-dependent relaxation in diabetic rat aorta G. M. Pieper and G. J. Gross	H825
Pressure-flow characteristics and nutritional capacity of coronary veins in dogs M. V. Cohen, T. Matsuki, and J. M. Downey	H834
Independent blockade of cerebral vasodilation from acetylcholine and nitric oxide J. J. Marshall, E. P. Wei, and H. A. Kontos	H847
Cytoplasmic Mg ²⁺ concentration in platelets: implications for determination	11011
of Ca ²⁺ with aequorin J. A. Ware, M. Smith, E. T. Fossel, and E. W. Salzman	H855
Relationship between dog saphenous vein reactivity and Na content V. Berczi and G. Simon	H860
Pulmonary inflation reflex: its lack of physiological significance in coronary circulation of humans	
R. F. Wilson, M. L. Marcus, and C. W. White	H866
Ca-antagonistic effects of adenosine in guinea pig atrial cells E. Cerbai, U. Klöckner, and G. Isenberg	H872
Responses of cerebral arteries after ischemia and reperfusion in cats W. G. Mayhan, S. M. Amundsen, F. M. Faraci, and D. D. Heistad	H879
Mechanism of adenosine receptor-induced renal vasoconstriction in rats N. Rossi, P. Churchill, V. Ellis, and B. Amore	H885
Influence of shock strength and timing on induction of ventricular arrhythmias in dogs N. Shibata, PS. Chen, E. G. Dixon, P. D. Wolf, N. D. Danieley, W. M. Smith, and R. E. Ideker	H891
Epicardial activation after unsuccessful defibrillation shocks in dogs	11031
N. Shibata, PS. Chen, E. G. Dixon, P. D. Wolf, N. D. Danieley, W. M. Smith, and R. E. Ideker	H902
Arterial pressure control after chronic carotid sinus denervation D. S. O'Leary and A. M. Scher	H910
Subcellular electrolyte shifts during in vitro myocardial ischemia and reperfusion L. G. Walsh and J. McD. Tormey	H917
Cellular compartmentation in ischemic myocardium: indirect analysis by electron probe L. G. Walsh and J. McD. Tormey	H929
Sympathetic tone affects human limb vascular resistance during a maximal metabolic stimulus	
L. I. Sinoway, J. S. Wilson, R. Zelis, J. Shenberger, D. P. McLaughlin, D. L. Morris, and F. P. Day	H937
SPECIAL COMMUNICATIONS	
Acute changes in forearm venous volume and tone using radionuclide plethysmography D. E. Manyari, T. J. Malkinson, V. Robinson, E. R. Smith, and K. E. Cooper	H947
[14C]butanol distribution: a new method for measurement of spinal cord blood flow T. Sakamoto, S. Shimazaki, and W. W. Monafo	H953

RAPID COMMUNICATIONS

	Antibodies against ADP-ATP carrier enhance Ca ²⁺ current in isolated cardiac myocytes M. Morad, N. W. Davies, G. Ulrich, and HP. Schultheiss	H960
	Hyperpolarization and increased free calcium in acetylcholine- stimulated endothelial cells	*****
	R. Busse, H. Fichtner, A. Lückhoff, and M. Kohlhardt	H965
	Positive inotropic action of novel vasoconstrictor peptide endothelin on guinea pig atria T. Ishikawa, M. Yanagisawa, S. Kimura, K. Goto, and T. Masaki	H970
	Exercise training attenuates baroreflex regulation of nerve activity in rabbits S. E. DiCarlo and V. S. Bishop	H974
	A new oil-gate concentration jump technique applied to inside-out patch-clamp recording D. Qin and A. Noma	H980
	LETTERS TO THE EDITOR	
	Accommodation and hysteresis in atrioventricular propagation P. Lorente and J. Jalife	H985
	ANNOUNCEMENTS	H986
No. 5. N	OVEMBER 1988	
	Endogenous opiate modulation of baroreflexes in normotensive and hypertensive rats J. E. Szilagyi	H987
	Effects of ischemic conditions and reperfusion on depolarization-induced automaticity R. Mohabir and G. R. Ferrier	H992
	α-Adrenoceptors and cold-induced vasoconstriction in human finger skin L. Ekenvall, L. E. Lindblad, O. Norbeck, and BM. Etzell	H1000
	Relation of blood flow to $\dot{V}o_2$, Po_2 , and Pco_2 in dog gastrocnemius muscle $D.~E.~Mohrman~and~R.~R.~Regal$	H1004
	Angiotensin receptor binding and pressor effects in cat subretrofacial nucleus A. M. Allen, R. A. L. Dampney, and F. A. O. Mendelsohn	H1011
	Enhanced cold pressor reponse in spontaneously hypertensive rats on high-NaCl diet R. M. Thornton, J. M. Davidson, and S. Oparil	H1018
	Isolation of a translation-inhibiting peptide from myocardium P. A. Havre and G. L. Hammond	H1024
	Inhibitors of cyclooxygenase augment serotonergic responsiveness in canine coronary arteries	
	G. Blaise, A. Iqbal, and P. M. Vanhoutte	H1032
	Enhanced vascular α -adrenergic neuroeffector system in diabetes: importance of calcium R. E. White and G. O. Carrier	H1036
	Total and regional blood flows in vascularized skeletal muscle grafts in rabbits H. W. Burton, T. R. Stevenson, R. C. Dysko, K. P. Gallagher, and J. A. Faulkner	H1043
	Differential sympathetic regulation of automatic, conductile, and contractile tissue in dog heart J. L. Ardell, W. C. Randall, W. J. Cannon, D. C. Schmacht, and E. Tasdemiroglu	H1050
	Temporal relation between neutrophil accumulation and myocardial reperfusion injury E. F. Smith, III, J. W. Egan, P. J. Bugelski, L. M. Hillegass, D. E. Hill, and D. E. Griswold	H1060
	Acute postburn edema: role of strongly negative interstitial fluid pressure T. Lund, H. Wiig, and R. K. Reed	H1069
	Pulmonary embolism: analysis of endothelial pore sizes in canine lung M. I. Townsley, J. C. Parker, G. L. Longenecker, M. L. Perry, R. M. Pitt, and A. E. Taylor	H1075
	Combined neurohumoral block modulates pulmonary vascular P/Q relationship in conscious dogs H. S. Geller, D. P. Nyhan, H. M. Goll, P. W. Clougherty,	
	B. B. Chen, and P. A. Murray	H1084

Intramural distribution of intestinal blood flow during sympathetic stimulation A. P. Shepherd and G. L. Riedel	H1091
Vascular reactivity and permeability to serotonin in cyclooxygenase-inhibited dog lung W. F. Hofman and I. C. Ehrhart	H1096
Naloxone alters organ perfusion during endotoxin shock in conscious rats W. R. Law and J. L. Ferguson	H1106
Control of bat wing capillary pressure and blood flow during reduced perfusion pressure $M.J.$ Davis	H1114
Pulmonary and systemic blood flow contributions to upper airways in canine lung S. A. Barman, J. L. Ardell, J. C. Parker, M. L. Perry, and A. E. Taylor	H1130
Isochronal behavior in left ventricular systolic pressure wall thickness relations $J.\ T.\ Funai\ and\ M.\ D.\ Thames$	H1136
Effects of arterial hypoxia and isoproterenol on in vitro postnatal intestinal circulation P. T. Nowicki, C. E. Miller, and S. E. Haun	H1144
Lymph flow during increases in pulmonary blood flow and microvascular pressure in dogs	H1140
F. A. Grimbert, D. Martin, J. C. Parker, and A. E. Taylor Substrate exchange in human limb muscle during exercise at reduced blood flow F. Lundgren, K. Bennegård, A. Elander, K. Lundholm,	H1149
T. Scherstén, and AC. Bylund-Fellenius	H1156
Pulmonary hypertension due to monocrotaline pyrrole is reduced by moderate thrombocytopenia P. E. Ganey, K. H. Sprugel, S. M. White, J. G. Wagner, and R. A. Roth	H1165
Effects of phenylephrine on calcium current and contractility	111100
of feline ventricular myocytes H. A. Hartmann, N. J. Mazzocca, R. B. Kleiman, and S. R. Houser	H1173
Mechanism of antihypertensive effect of potassium depletion in renovascular hypertension	
C. R. Nolan and S. L. Linas	H1181
Myocardial neutrophil accumulation during reperfusion after reversible or irreversible ischemic injury	
L. O. Gø, C. E. Murry, V. J. Richard, G. R. Weischedel, R. B. Jennings, and K. A. Reimer	H1188
Carotid sinus pressure and pl.:sma vasopressin in anesthetized rabbits C. A. Courneya, A. J. Rankin, N. Wilson, and J. R. Ledsome	H1199
An approach to measuring cardiac output with Doppler flow probes in conscious rats R. Veelken, P. Schelling, and T. Unger	H1206
Cerebral blood flow and interstitial fluid adenosine during hemorrhagic hypotension D. G. L. Van Wylen, T. S. Park, R. Rubio, and R. M. Berne	H1211
Muscarinic regulation of pulmonary intravascular volume in isolated canine lungs L. Bell and D. L. Rutlen	H1219
Regionally variable pulmonary artery responses to C3a R. E. Crowell, W. P. Reed, D. Van Epps, T. Anaya, D. E. Chenoweth, J. Leach, and T. W. Chick	H1227
Efficacy of vasodilator therapy in canine model of acute pulmonary hypertension $H.\text{-}J.\ Priebe$	H1232
SPECIAL COMMUNICATIONS	
Effective diameter as a determinant of local vascular resistance in presence of vasomotion	
D. W. Slaaf, H. H. E. O. Vrielink, GJ. Tangelder, and R. S. Reneman	H1240
Concerning reflex summation A. S. Greene and M. J. Brunner	H1244
MODELING METHODOLOGY FORUM	
Computer algorithm for modeling transmission over one or two conduction pathways	

L. D. Dorveaux, N. Twidale, N. Robinson, and A. M. Tonkin

H1247

RAPID COMMUNICATIONS

ATP-sensitive K+ channels are altered in hypertophied ventricular myocytes J. S. Cameron, S. Kimura, D. A. Jackson-Burns, D. B. Smith, and A. L. Bassett H1254 In vivo bioassay of endothelium-derived relaxing factor H. A. Kontos, E. P. Wei, and J. J. Marshall H1259 LETTERS TO THE EDITOR Optimal external power or efficiency? D. Burkhoff and K. Sagawa; N. Westerhof, V. J. A. Schouten, G. P. Toorop, and G. Elzinga H1263 **ANNOUNCEMENTS** H1265 No. 6. DECEMBER 1988 **BOWDITCH LECTURE** introduction H1267 Role of xanthine oxidase and granulocytes in ischemia-reperfusion injury D. N. Granger H1269 Epinephrine potentiates human platelet activation but is not an aggregating agent F. Lanza, A. Beretz, A. Stierlé, D. Hanau, M. Kubina, and J.-P. Cazenave H1276 Decreased vascular contraction and elastic stiffening after intramural lymphostasis V. Bérczi, F. Solti, F. Schneider, and E. Monos H1289 Myocardial metabolism and coronary flow: effects of endotoxemia W. L. Rumsey, L. Kilpatrick, D. F. Wilson, and M. Erecinska H1295 Carotid sinus baroreceptor control of splanchnic resistance and capacity M. J. Brunner, A. S. Greene, A. E. Frankle, and A. A. Shoukas H1305 Effects of hypoxia and reoxygenation on maximum rate of early left ventricular filling K. Kusunoki, Y. Nakamura, T. Konishi, and C. Kawai H1311 Flow-mediated dilation attenuates constriction of large coronary arteries to serotonin K. G. Lamping and W. P. Dole H1317 V₁ vs. combined V₁ + V₂ vasopressin blockade after hemorrhage in conscious dogs H1325 Coronary dilation with carotid chemoreceptor stimulation in cardiac-denervated dogs M. Nagata, R. Pichet, and M. Lavallee H1330 Effect of pulmonary perfusion on lung fluid filtration in young lambs W. G. Teague, M. E. Berner, and R. D. Bland H1336 Demonstration of hysteresis in refractoriness of canine ventricular myocardium C. Giorgi, M. Vermeulen, R. Cardinal, P. Savard, R. Nadeau, and M. Shenasa H1342 Stimulation of parabrachial neurons elicits a sympathetically mediated pressor response in cats J. S. Hade, S. W. Mifflin, T. S. Donta, and R. B. Felder H1349 Reentrant and focal arrhythmias in low potassium in isolated rabbit atrium W. J. E. P. Lammers, M. A. Allessie, and F. I. M. Bonke H1359 Regional variation in pericardial contact pressure in the canine ventricle B. D. Hoit, W. Y. W. Lew, and M. LeWinter H1370 Acetate causes endothelium-independent increases in cyclic AMP in rat caudal artery J. T. Daugirdas, V. Swanson, S. Islam, C. Nutting, D. D. Kim, X. Wang, and H1378 Microvascular morphometry and perfusion in renal hypertension-induced cardiac hypertrophy C. M. Cimini and H. R. Weiss H1384 Stretch-induced contraction in pulmonary arteries

H1391

T. J. Kulik, J. N. Evans, and W. J. Gamble

In vivo estimation of left ventricular wall volume in volume-overloaded canine hearts M. P. Feneley, J. W. Gaynor, G. W. Maier, S. A. Gall, Jr., J. A. Kisslo, and	
J. S. Rankin	H1399
Area of the aortic pressure-flow loop measures energy storage by the proximal arteries R. F. Appleyard, K. B. Campbell, and J. A. Ringo	H1405
Responses of contractile function to ruthenium red in rat heart M. P. Gupta, I. R. Innes, and N. S. Dhalla	H1413
Pulmonary and peripheral lymph protein clearance during bacteremia after surgery W. E. Charash, T. M. Saba, E. P. Lewis, and M. A. Lewis	H1421
Mechanism of inhibition by methacholine of norepinephrine-stimulated ANP secretion $R.\ J.\ Schiebinger$	H1429
Calcium currents in normal and hypertrophied isolated feline ventricular myocytes R. B. Kleiman and S. R. Houser	H1434
Cardiovascular and sympathoadrenal responses to mental stress: influence of β -blockade $U.$ Freyschuss, $P.$ Hjemdahl, $A.$ Juhlin-Dannfelt, and $B.$ Linde	H1443
α-Adrenergic vasoconstriction and receptor subtypes in large coronary arteries of calves M. A. Young, D. E. Vatner, D. R. Knight, R. M. Graham, C. J. Homcy, and S. F. Vatner	H1452
Metabolic hyperemia is reduced in adult vs. immature guinea pig hearts	111402
B. S. Toma, R. D. Wangler, and H. V. Sparks	H1460
Separation of rate of left ventricular relaxation from chamber stiffness in rats SI. Momomura, M. Iizuka, T. Serizawa, and T. Sugimoto	H1468
Phosphoinositide metabolism and metabolism-contraction coupling in rabbit aorta R. F. Coburn, C. Beron, and M. T. Papadopoulos	H1476
Endothelial injury and vascular reactivity in monocrotaline pulmonary hypertension H. C. Rosenberg and M. Rabinovitch	H1484
Effect of adenosine and its analogues on calcium influx in coronary artery M. V. Ramagopal and S. J. Mustafa	H1492
Intralipid effect on normal and hypoxic remodeled rat pulmonary vasculature R. Ilkiw, K. Maruyama, and M. Rabinovitch	H1499
Blood flow in normal and denervated muscle during exercise in conscious rats M. D. Delp and R. B. Armstrong	H1509
Effect of jugular venous pressure on cerebral autoregulation in dogs R. W. McPherson, R. C. Koehler, and R. J. Traystman	H1516
Sympathetic augmentation of cardiac function in developing hypertension in conscious dogs	******
R. J. Gelpi, L. Hittinger, A. M. Fujii, V. M. Crocker, I. Mirsky, and S. F. Vatner	H1525
SPECIAL COMMUNICATIONS	
Intrarenal blood flow distribution in dog kidney determined by $^{99m}\mathrm{Tc}$ microaggregates and $^{201}\mathrm{Tl}$	
U. Abildgaard, O. Amtorp, J. Gyring, G. Daugaard, and B. Larsen Antiserum to angiotensin-binding protein inhibits vascular responses to angiotensin II	H1535
R. C. Webb, M. A. R. Kiron, E. Rosenberg, and R. L. Soffer Blood oxygen content estimated from Po ₂ , Pco ₂ , and pH	H1542
S. F. Belanger, S. A. Katz, A. H. Huang, and E. O. Feigl	H1545
RAPID COMMUNICATIONS	
ACh-induced calcium transients in primary cultures of rabbit aortic endothelial cells N. R. Danthuluri, M. I. Cybulsky, and T. A. Brock	H1549
pH and voltage dependence of $I_{\rm Na}$ recovery kinetics in atrial cells exposed to lidocaine K. R. Courtney	H1554
Myogenic activity in isolated subepicardial and subendocardial coronary arterioles L. Kuo, M. J. Davis, and W. M. Chilian	H1558
Subject Index to Volume 24 Author Index to Volume 24	H1563 H1575
There is I have to I there at	



American Journal of Physiology: Regulatory, Integrative and Comparative Physiology

Propylthiouracil, but not other antithyroid treatments, lengthens hamster circadian period	Di
L. P. Morin Vagal C-fiber blockade abolishes sympathetic inhibition by atrial natriuretic factor H. D. Schultz, D. G. Gardner, C. F. Deschepper,	R1
H. M. Coleridge, and J. C. G. Coleridge Cholecystokinin inhibits independent ingestion in neonatal rats	R6
P. H. Robinson, T. H. Moran, and P. R. McHugh	R14
A comparison of cholecystokinin-induced changes in gastric emptying and feeding in rats K. L. Conover, S. M. Collins, and H. P. Weingarten	R21
Electroencephalogram analysis of non-rapid eye movement sleep in rats L. Trachsel, I. Tobler, and A. A. Borbély	R27
Liver fructose 2,6-bisphosphate in rats running at different treadmill speeds W. W. Winder, H. T. Yang, and J. Arogyasami	R38
Real importance of alanine in renal metabolism: in vitro studies in rat and dog G. Lemieux, J. Berkofsky, C. Lemieux, A. Quenneville, and M. Marsolais	R42
Hemodynamic responses to vasopressinergic antagonism in water-deprived conscious rats	
B. L. Brizzee, L. Harrison-Bernard, H. A. Pretus, G. G. Clifton, and B. R. Walker Enzymatic and transport characteristics of isolated snake renal brush-border membranes	R46
S. Benyajati and W. H. Dantzler	R52
Cardiorenal endocrine dynamics during volume expansion in hypothyroid dogs R. S. Zimmerman, J. Ryan, B. S. Edwards, G. Klee, D. Zimmerman, N. Scott, and J. C. Burnett, Jr.	R61
Comparison of hormonal responses to hypotension in mature and immature fetal lambs N. M. Rawashdeh, N. D. Ray, D. K. Sundberg, and J. C. Rose	R67
Physiological changes during thermoregulation and fever in urethan-anesthetized rats T. J. Malkinson, K. E. Cooper, and W. L. Veale	R73
Integrated metabolic control of food intake after 2-deoxy-D-glucose and nicotinic acid injection P. Even, H. Coulaud, and S. Nicolaidis	R82
Norepinephrine turnover in iron deficiency at three environmental temperatures J. Beard, B. Tobin, and S. M. Smith	R90
$\ensuremath{H^+}$ homeostasis, osmolality, and body temperature during controlled NaCl and $\ensuremath{H_2O}$ intake	
J. W. Anderson and D. B. Jennings Osmolality, NaCl dietary intake, and regulation of ventilation by CO.	R97
J. W. Anderson and D. B. Jennings	R105
CCK-8 decreases food intake and gastric emptying after pylorectomy or pyloroplasty G. P. Smith, J. Falasco, T. H. Moran, K. M. S. Joyner, and J. Gibbs	R113
Spatial map of salts and saccharides on dog tongue J. L. Garvin, R. Robb, and S. A. Simon	R117
Satiating effect of fat in diabetic rats: gastrointestinal and postabsorptive factors N. K. Edens and M. I. Friedman	R123
Group housing accelerates growth and induces obesity in adult hamsters K. T. Borer, A. Pryor, C. A. Conn, R. Bonna, and M. Kielb	R128
A novel endogenous sugar acid depolarizes ventromedial hypothalamic neurons in vitro A. Fukuda, Y. Oomura, C. R. Plata-Salamán, T. Minami, and C. Ito	R134
Energy balance in adrenalectomized ob/ob mice: effects of dietary starch and glucose B. P. Warwick and D. R. Romsos	R141

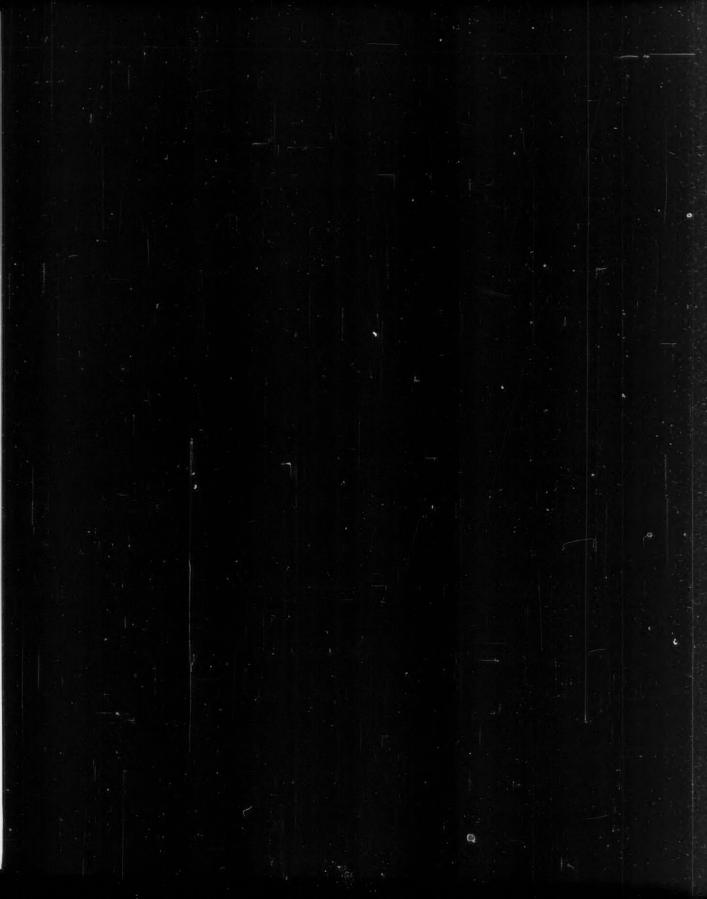
	Increase in vagal activity during hypotensive lower-body negative pressure in humans K. Sander-Jensen, J. Mehlsen, C. Stadeager, N. J. Christensen, J. Fahrenkrug, T. W. Schwartz, J. Warberg, and P. Bie	R149
	Muramyl dipeptide-induced sleep and fever: effects of ambient temperature and time of injections	
	S. Shoham and J. M. Krueger	R157
	Central interactions between aldosterone and vasopressin on cardiovascular system P. Janiak and M. J. Brody	R166
	SPECIAL COMMUNICATIONS	
	Measurement of ${}^{2}H_{2}O$ by IR absorbance in doubly labeled $H_{2}O$ studies of energy expenditure	
	W. H. Karasov, L. R. Han, and J. C. Munger	R174
	RAPID COMMUNICATIONS	
	Progressive activation of paratrigeminal nucleus during entrance to hibernation T. S. Kilduff, F. R. Sharp, and H. C. Heller	R178
	Cardiovascular responses to microinjection of ANF into dorsal medulla of rats D. J. McKitrick and F. R. Calaresu	R182
No. 2. Al	JGUST 1988	
	EDITORIAL	
	A new journal P. C. Johnson	R189
	Ingestive behavior in preweanling rats: emergence of postgastric controls C. B. Phifer and W. G. Hall	R191
	Penetration of peripheral glucose and insulin into cerebrospinal fluid in rats A. B. Steffens, A. J. W. Scheurink, D. Porte, Jr., and S. C. Woods	R200
	Angiotensin-related sodium appetite and thirst in cattle J. R. Blair-West, D. A. Denton, M. J. McKinley, and R. S. Weisinger	R205
	Neural control of shark rectal gland J. S. Stoff, P. Silva, R. Lechan, R. Solomon, and F. H. Epstein	R212
	Thirst in Brattleboro rats L. M. Fuller and J. T. Fitzsimons	R217
	Lipoprotein lipase in white and brown adipose tissues of exercised rats fed a high-fat diet	
	Y. Deshaies, J. Arnold, J. Lalonde, and D. Richard Atrial distension of isolated rabbit hearts and release of atrial natriuretic factor	R226
	D. P. Synhorst and J. Gutkowska Melatonin administration entrains female rat activity rhythms in constant darkness but not in constant light	R232
	E. M. V. Thomas and S. M. Armstrong	R237
	Trabecular bone remodeling after seven days of weightlessness exposure (BIOCOSMOS 1667) L. Vico, D. Chappard, S. Palle, A. V. Bakulin, V. E. Novikov, and C. Alexandre	R243
	Changes in vasopressin and cortisol secretion during operant drinking in dehydrated pigs R. F. Parrott, S. N. Thornton, B. A. Baldwin, and M. L. Forsling	R248
	Carotid bifurcation sympathectomy and deafferentation: respiration during hypercapnia D. B. Jennings and P. C. Szlyk	R252
	Natriuresis during atrial distension and a concurrent decline in plasma atriopeptin K. L. Goetz, B. C. Wang, P. Bie, R. J. Leadley, Jr., and P. G. Geer	R259
	Effect of teleost GnRH on reinitiation of oocyte meiosis in goldfish, in vitro	R268

	Hormonal and electrolyte responses of conscious sheep to 96 h of hypoxia D. C. Curran-Everett, J. R. Claybaugh, K. Miki, SK. Hong, and J. A. Krasney	R274
	Effect of starvation and food intake on sympathetic activity	
	T. Sakaguchi, K. Arase, J. S. Fisler, and G. A. Bray Subcellular enzyme binding in glycolytic control: in vivo studies with fish muscle	R284
	S. P. J. Brooks and K. B. Storey	R289
	Regional neurohypophysial and hypothalamic blood flow in rats during hypercapnia R. M. Bryan, Jr., C. L. Myers, and R. B. Page	R295
	Effect of burn and first-pass splanchnic leucine extraction on protein kinetics in rats M. D. Karlstad, S. J. DeMichele, N. Istfan, G. L. Blackburn, and B. R. Bistrian	R303
	Growth hormone-releasing factor enhances sleep in rats and rabbits F. Obal, Jr., P. Alföldi, A. B. Cady, L. Johannsen, G. Sary, and J. M. Krueger	R310
	A compartmental analysis of solute transfer and exchange across blood-nerve barrier E. Rechthand, Q. R. Smith, and S. I. Rapoport	R317
	In vivo transferrin-iron receptor relationships in erythron of rats T. Intragumtornchai, H. A. Huebers, M. Eng, and C. A. Finch	R326
	Effects of melatonin on 2-deoxy-[1-14C]glucose uptake within rat suprachiasmatic nucleus	
	V. M. Cassone, M. H. Roberts, and R. Y. Moore	R332
	Brain and cerebrospinal fluid ion composition after long-term anoxia in diving turtles H. F. Cserr, M. DePasquale, and D. C. Jackson	R338
	Evidence for rapid inhibition of ACTH by corticosteroids in dogs M. Keller-Wood and M. E. Bell	R344
	LETTERS TO THE EDITOR	
	A theory of similitude may predict a metabolic mass exponent A. A. Heusner; J. P. Butler, H. A. Feldman, and J. J. Fredberg	R350
No. 3. S	EPTEMBER 1988	
	INVITED REVIEW	
	Multiple linear regression is a useful alternative to traditional analyses of variance B. K. Slinker and S. A. Glantz	R353
	Atrial natriuretic peptide inhibits postural release of renin and vasopressin in humans T. D. M. Williams, K. P. Walsh, S. L. Lightman, and R. Sutton	R368
	Pituitary involvement in renal adaptation to phosphate deprivation H. S. Tenenhouse, A. H. Klugerman, W. Gurd,	D979
	M. Lapointe, and G. S. Tannenbaum Plasma dopamine in regulation of canine renal blood flow	R373
	D. R. Kapusta and N. W. Robie	R379
	Renal nerves and renal responses to volume expansion in conscious monkeys T. V. Peterson, B. A. Benjamin, and N. L. Hurst	R388
	Correlation between catecholamine release and degree of acidotic stress in trout Y. Tang and R. G. Boutilier	R395
	Role of metabolic feedback regulation in glucose production of running rats J. Vissing, B. Sonne, and H. Galbo	R400
	Enhanced ANG II activity in anterior pituitary cell aggregates from hypertensive rats W. Robberecht and C. Denef	R407
	Are fetal adrenocorticotropic hormone and renin secretion suppressed by maternal cortisol secretion? C. E. Wood	D410
	Glomerular permselectivity to serum proteins in rainbow trout (Salmo gairdneri)	R412
	B. Elger, H. Rühs, and H. Hentschel Strain differences in taste reactivity to NaCl	R418
	H. J. Grill and I. L. Bernstein	R424

	Cardiovascular and renal responses to stress in borderline hypertensive rat B. J. Sanders, R. H. Cox, and J. E. Lawler	R431
	Entrainment of hamster pup circadian rhythms by prenatal melatonin injections to the mother	
	F. C. Davis and J. Mannion	R439
	Renal response of anesthetized rats to low-dose infusion of atrial natriuretic peptide H. Soejima, R. J. Grekin, J. P. Briggs, and J. Schnermann	R449
	Polycythemia and hydration: effects on thermoregulation and blood volume during exercise-heat stress M. N. Sawka, R. R. Gonzalez, A. J. Young, S. R. Muza, K. B. Pandolf,	
	W. A. Latzka, R. C. Dennis, and C. R. Valeri Oscillating heat flow from rabbit's pinna	R456
	F. S. Mohler and J. E. Heath	R464
	Muscle composition and its relation to sprint running in the lizard Dipsosaurus dorsalis T. T. Gleeson and J. M. Harrison	R470
	Suppression of evoked potentials with continued ion transport during anoxia in turtle brain ZC. Feng, M. Rosenthal, and T. J. Sick	R478
	Orthodromic field potentials and recurrent inhibition during anoxia in turtle brain	10410
	ZC. Feng, T. J. Sick, and M. Rosenthal	R485
	Membrane potential drives organic cation transport into teleost renal proximal tubules P. M. Smith, J. B. Pritchard, and D. S. Miller	R492
	Plasma angiotensin II levels at moment of drinking during angiotensin	
	II intravenous infusion J. A. M. Van Eekelen and M. I. Phillips	R500
	Lateral hypothalamus and sympathetic firing rate T. Sakaguchi, M. Takahashi, and G. A. Bray	R507
	Metabolic changes in skeletal muscle and blood of greyhounds during 800-m track sprint G. P. Dobson, W. S. Parkhouse, JM. Weber, E. Stuttard, J. Harman, D. H. Snow, and P. W. Hochachka	R513
No. 4. OC	TOBER 1988	
	Postnatal undernutrition slows development of bronchiolar epithelium in rats G. D. Massaro, L. McCoy, and D. Massaro	R521
	Effect of indomethacin on febrile response to recombinant human interleukin $1-\alpha$ in rabbits	
	M. Hashimoto, T. Bando, M. Iriki, and K. Hashimoto Release of atrial natriuretic factor in hypophysectomized rats	R527
	J. R. Dietz and S. J. Nazian	R534
	Characterization of glucagon and catecholamine effects on isolated sheep hepatocytes C. Morand, C. Yacoub, C. Remesy, and C. Demigne	R539
	Central and peripheral adrenoceptors affect glucose, free fatty acids, and insulin in exercising rats A. J. W. Scheurink, A. B. Steffens, and L. Benthem	R547
	β-Receptors in resistance to phosphaturic effect of PTH in respiratory alkalosis A. Hoppe, A. Rybczyńska, F. G. Knox, and S. Angielski	R557
	Renal hemodynamics and vascular reactivity in canine DOCA-salt hypertension J. L. Goering, P. C. Raich, and B. G. Zimmerman	R563
	Capsaicin attenuates suppression of sham feeding induced by intestinal nutrients D. P. Yox and R. C. Ritter	R569
	Vasoactive intestinal peptide stimulates blood flow and secretion of avian salt glands R. Gerstberger, H. Sann, and E. Simon	R575
	Sugar-stimulated ion absorption is not different in seahare and vertebrate intestine W. M. Moran and L. T. Garretson	R583
	Angiotensin II-induced relaxation of fowl aorta K. Yamaguchi and H. Nishimura	R591
		TAGAT

	Adrenoceptors and temperature regulation in goldfish L. P. Wollmuth, L. I. Crawshaw, and R. N. Rausch	R600
	GABA-mediated inhibition of sympathoexcitatory neurons	R600
	by midline medullary stimulation R. B. McCall	R605
	Effects of meal frequency on energy utilization in rats J. O. Hill, J. C. Anderson, D. Lin, and F. Yakubu	R616
	Time course of thermal adaptation in plasma membranes of trout kidney. I. Headgroup composition	Daga
	J. R. Hazel and S. R. Landrey Time course of thermal adaptation in plasma membranes of trout kidney. II. Molecular species composition J. R. Hazel and S. R. Landrey	R622
	Parathyroid hormone-like immunoreactivity in brains of tetrapod vertebrates P. K. T. Pang, S. Harvey, R. Fraser, and T. Kaneko	R635
	Immunocytochemical distribution of PTH-immunoreactivity in vertebrate brains P. K. T. Pang, T. Kaneko, and S. Harvey	R643
	Na-dependent L-proline transport by eel intestinal brush-border membrane vesicles S. Vilella, G. A. Ahearn, G. Cassano, and C. Storelli	R648
	Differentiation of cardiac baroreflex properties by cuff and drug methods in two rabbit strains	
	M. Weinstock, P. I. Korner, G. A. Head, and P. K. Dorward	R654
	RAPID COMMUNICATIONS	
	Intravenous vasopressin infusion decreases plasma ACTH concentration in conscious dogs V. L. Brooks, L. J. Blakemore, and L. C. Keil	R665
	Robust conditioned flavor preference produced by intragastric starch infusions in rats A. Sclafani and J. W. Nissenbaum	R672
	ANNOUNCEMENTS	R676
No. 5. N	IOVEMBER 1988	
	CONTROVERSY	
	Is there a Cl ⁻ pump? G. A. Gerencser, J. F. White, D. Gradmann, and S. L. Bonting	R677
	Neurogenic and humoral factors maintaining arterial pressure in conscious dogs E. M. Hasser and V. S. Bishop	R693
	Biosynthetic capacity of hummingbird liver R. K. Suarez, R. W. Brownsey, W. Vogl, G. S. Brown, and P. W. Hochachka	R699
	Localization of vagal preganglionic somata controlling sinoatrial and atrioventricular nodes D. M. Plecha, W. C. Randall, G. S. Geis, and R. D. Wurster	R703
	Pressor responses from electrical or glutamate stimulations of the dorsal or ventrolateral medulla C. Y. Chai, R. H. Lin, A. M. Y. Lin, C. M. Pan, E. H. Y. Lee, and J. S. Kuo	R709
	Exercise inhibits reproductive quiescence induced by exogenous melatonin in hamsters D. R. Pieper, K. T. Borer, C. A. Lobocki, and D. Samuel	R718
	Acetyl-CoA hydrolase: relation between activity and cholesterol metabolism in rat S. Ebisuno, F. Isohashi, Y. Nakanishi, and Y. Sakamoto	R724
	Effects of hemorrhage on vasopressin and Met-Enk releases in blood and cerebrospinal fluid in dogs	
	K. Ota, T. Kimura, K. Matsui, K. Iitake, M. Shoji, M. Inoue, and K. Yoshinaga Regional hemodynamic effects of atrial natriuretic peptide or captopril	R731
	in Brattleboro rats S. M. Gardiner, A. M. Compton, and T. Bennett	R737

	CRF activates autonomic nervous system and reduces natural killer cytotoxicity M. Irwin, R. L. Hauger, M. Brown, and K. T. Britton	R744
	Polyriboinosinic:polyribocytidylic acid enhances rabbit slow-wave sleep J. M. Krueger, J. A. Majde, C. M. Blatteis, J. Endsley,	D740
	R. A. Ahokas, and A. B. Cady Renal interstitial hydrostatic pressure during pressure natriuresis in hypertension	R748
	A. A. Khraibi and F. G. Knox	R756
	Allometry of the kidney: implications for the ontogeny of osmoregulation $C.\ A.\ Beuchat\ and\ E.\ J.\ Braun$	R760
	Effects of chronic sinoaortic denervation on central vasopressin and catecholamine systems N. Alexander and M. Morris	R768
	Organ-specific control of glycolysis in anoxic turtles D. A. Kelly and K. B. Storey	R774
	Tracheal and phrenic responses to neurotensin applied to ventral medulla M. A. Haxhiu, E. C. Deal, Jr., R. D. Trivedi,	Deco
	E. Van Lunteren, and N. S. Cherniack	R780
	Food restriction normalizes somatic growth and diabetes in adrenalectomized ob/ob mice P. U. Dubuc and H. J. Carlisle Differential maturation of 6 advancements mediated responses in the lamb fature.	R787
	Differential maturation of β -adrenoceptor-mediated responses in the lamb fetus N. M. Rawashdeh, J. C. Rose, and N. D. Ray	R794
	Brain tissue elastic behavior and experimental brain compression A. Schettini and E. K. Walsh	R799
	Effect of vasopressin on adrenal steroidogenesis E. G. Schneider	R806
	Peak duration of serum melatonin and short-day responses in adult Siberian hamsters T. J. Bartness and B. D. Goldman	R812
	Effects of melatonin on long-day responses in short-day housed adult Siberian hamsters T. J. Bartness and B. D. Goldman	R823
	Vole infant development is influenced perinatally by maternal photoperiodic history T. M. Lee and I. Zucker	R831
	Immune activation and psychoneurogenic stress modulate corticosterone-releasing effects of lymphokines and ACTH I. Torres-Aleman, I. Barasoain, J. Borrell, and C. Guaza	R839
	Fetal and adult urine flow and ANF responses to vascular volume expansion R. A. Brace, L. K. Miner, A. D. Siderowf, and C. Y. Cheung	R846
	SPECIAL COMMUNICATIONS	
	Evaluation of a blood sample-transfusion protocol in rats: blood gases, renin, and ACTH $\it H.~Raff$	R851
	RAPID COMMUNICATIONS	
	Area postrema stimulation induced cardiovascular changes in the rat	Dorr
	A. V. Ferguson and P. Marcus Paraventricular nucleus stimulation causes gastroduodenal mucosal necrosis in the rat A. V. Ferguson, P. Marcus, J. Spencer, and J. L. Wallace	R855
No. 6. DE	CEMBER 1988	
	Atrial natriuretic hormone effect on renal function and aldosterone secretion in sodium depletion	
	Y. Shenker	R867
	Neural influences on trophic changes in brown adipose tissue during cold acclimation I. R. A. Park and J. Himms-Hagen	R874





American Journal of Physiology: Renal, Fluid and Electrolyte Physiology

No. 1. JULY 1988

EDITORIAL REVIEW

Do osmotic forces play a role in renin secretion? O. Skøtt	F1
Effects of maternal hyperglycemia on fetal renal function in sheep F. G. Smith and E. R. Lumbers	F11
Nicotinamide as a rapid-acting inhibitor of renal brush-border phosphate transport K. I. Wu, R. A. Bacon, H. A. Al-Mahrouq, and S. A. Kempson	F15
Asymmetry of plasma membrane lipid order in Madin-Darby canine kidney cells C. Le Grimellec, G. Friedlander, and MC. Giocondi	F22
Effect of a denosine analogues on tubuloglomerular feedback responses $\it J.Schnermann$	F33
Effect of PGE $_2$ and $\alpha\text{-adrenergic}$ agonists on AVP-dependent cAMP levels in rabbit and rat CCT	
D. Chabardès, C. Brick-Ghannam, M. Montégut, and S. Siaume-Perez	F43
Intracellular chloride activity of rabbit proximal straight tubule perfused in vitro K. Ishibashi, S. Sasaki, and N. Yoshiyama	F49
Active NH_{+}^{*} absorption by the thick ascending limb J. L. Garvin, M. B. Burg, and M. A. Knepper	F57
Additive and synergistic interaction of atrial natriuretic peptide and volume expansion S. Reddy, D. Kelly, C. Cochineas, and A. Z. Györy	F66
$\alpha_2\text{-}Agonists$ block ADH action in to ad bladder and this inhibition is not modified by indomethac in	
M. Alvo, A. M. Espinoza, V. Fernandez, and E. T. Marusic	F74
Active absorption of NH $^{+}_{4}$ by rat medullary thick ascending limb: inhibition by potassium $D.~W.~Good$	F78
Decreased transport in renal basolateral membrane vesicles from hypertaurinuric mice S. Mandla, C. R. Scriver, and H. S. Tenenhouse	F88
Effect of cAMP analogue infusion on phosphate reabsorption in phosphate-deprived rats T. J Berndt, M. J. Onsgard, and F. G. Knox	F96
Localization and secretion of newly synthesized and stored renin: two compartments and secretory mechanisms	
M. Kawamura, M. Parmentier, and T. Inagami	F100
An acute increase of peritubular K stimulates K transport through cell pathways of CCT $S.\ Muto,\ G.\ Giebisch,\ and\ S.\ Sansom$	F108
Immunocytochemical localization of band 3 protein in the rat collecting duct J. W. Verlander, K. M. Madsen, P. S. Low, D. P. Allen, and C. C. Tisher	F118
Intracellular pH in frog skin: effects of Na ⁺ , volume, and cAMP M. M. Civan, E. J. Cragoe, Jr., and K. Peterson-Yantorno	F120
$\mathrm{NH_3}$ permeation through the apical membrane of MDCK cells is via a lipid pathway $K.$ Golchini and $I.$ Kurtz	F13
AVP-induced Ca fluxes and contraction of rat glomerular mesangial cells K. Takeda, H. Meyer-Lehnert, J. K. Kim, and R. W. Schrier	F14:
Renal cytochrome P-450-related arachidonate metabolism in rabbit aortic coarctation M. A. Carroll, M. Schwartzman, M. Baba, M. J. S. Miller, and J. C. McGiff	F15
Electrophysiological properties of amphibian late distal tubule in vivo G. Planelles and T. Anagnostopoulos	F15
TEA transport by snake renal tubules: choline effects, countertransport, H+-TEA exchange	
W. H. Dantzler and O. H. Brokl	F16

	Evidence for active dipeptide transport in isolated proximal straight tubules D. W. Barfuss, V. Ganapathy, and F. H. Leibach	F177
	Complementary role of citrate and bicarbonate excretion in acid-base balance in the rat A. M. Kaufman and T. Kahn	F182
	Cell membrane water permeabilities and streaming currents in Ambystoma proximal tubule S. Tripathi and E. L. Boulpaep	F188
No. 2. Al	UGUST 1988	
	EDITORIAL	
	A new journal P. C. Johnson	F205
	EDITORIAL REVIEW	_
	Molecular events in expression of vasopressin and oxytocin and their cognate receptors $\it D.Richter$	F207
	Absence of transepithelial anion exchange by rabbit OMCD: evidence against reversal of cell polarity M. Hayashi, V. L. Schuster, and J. B. Stokes	F220
	Passive NaCl transport in the flounder urinary bladder: predominance of a cellular pathway J. B. Stokes	F229
	Acidemia alone does not stimulate rat renal Na ⁺ -H ⁺ antiporter activity T. E. Northrup, S. Garella, E. Perticucci, and J. J. Cohen	F237
	Urea flux in the ureter B. L. Walser, Y. Yagil, and R. L. Jamison	F244
	Effect of feeding on glomerular filtration rate and proteinuria in conscious aging rats B. Corman, S. Chami-Khazraji, J. Schaeverbeke, and J. B. Michel	F250
	Course and pathogenesis of postischemic acute renal failure in the rat Y. Yagil, B. D. Myers, and R. L. Jamison	F257
	Microsomal protein synthesis inhibition: an early manifestation of gentamicin nephrotoxicity W. M. Bennett, L. M. Mela-Riker, D. C. Houghton, D. N. Gilbert, and W. C. Buss	F265
	Renal ornithine decarboxylase activity, polyamines, and compensatory renal hypertrophy in the rat	
	M. H. Humphreys, S. B. Etheredge, SY. Lin, J. Ribstein, and L. J. Marton Amiloride-sensitive cation channel in apical membrane of inner medullary collecting duct	F270
	D. B. Light, F. V. McCann, T. M. Keller, and B. A. Stanton	F278
	Developmental changes in the tubular capacity for phosphate reabsorption in the rat A. Haramati, S. E. Mulroney, and S. K. Webster	F287
	cAMP-binding proteins in medullary tubules from rat kidney: effect of ADH S. M. Gapstur, S. Homma, and T. P. Dousa	F292
	Effect of pH on citrate reabsorption in the proximal convoluted tubule S. Brennan, K. Hering-Smith, and L. L. Hamm	F301
	Suppression of acidification along inner medullary collecting duct H. H. Bengele, E. R. McNamara, J. H. Schwartz, and E. A. Alexander	F307
	Tubular site(s) of action of atrial natriuretic peptide in the rat T. A. Fried, R. W. Osgood, and J. H. Stein	F313
	Mechanism of α_2 -adrenoceptor agonist-induced diuresis M . Gellai and R . M . Edwards	F317
	Characterization of ANP receptors in rabbit inner medullary collecting duct cells M. E. Gunning, B. J. Ballermann, P. Silva, B. M. Brenner, and M. L. Zeidel	F324
	Modulation of Na ⁺ -H ⁺ exchange activity by intracellular Na ⁺ , H ⁺ , and Li ⁺ in IMCD cells S. M. Wall, J. A. Kraut, and S. Muallem	F331

Innervation	n of the	thick	ascer	nding	limb	of Henle
L.	Barajas	s and	K. V.	Powe	rs	

93	0	4	e
- PH	34	4	E

MODELING METHODOLOGY FORUM

Analysis of Pco2 variations in the renal cortex. I. Single nephron	
L. J. Atherton, D. A. Maddox, F. J. Gennari, and W. M. Deen	F34

Analysis of Pco ₂ variations in the renal cortex. II. Countercurrent exchange	
L. J. Atherton, D. A. Maddox, F. J. Gennari, and W. M. Deen	F36

ANNOUNCEMENTS

F372

No. 3. SEPTEMBER 1988

HOMER SMITH AWARD LECTURE

Introduction	F373
Antidiaretic hormone moves membranes	

Antidiuretic hormone moves membranes	
J. S. Handler	F378

Enhanced tubuloglomerular feedback during peritubular infusions	
of angiotensins I and II	
K. D. Mitchell and L. G. Navar	F383
Low concentrations of ANP cause pressure-dependent natriuresis in the isolated kidney	

Low concentrations of Arti cause pressure-dependent natifulesis in the isolated kidney	
J. D. Firth, A. E. G. Raine, and J. G. G. Ledingham	F391
Aming gold transport by justamedullary penhanes dietal reabcomtion and recycling	

W. H. Dantzler and S. Silbernagl	F397
Renal hemodynamics in response to a kinin analogue antagonist	
W. H. Beierwaltes, O. A. Carretero, and A. G. Scicli	F408

Direct vasodilatory action of atrial natriuretic factor on canine	
glomerular afferent arterioles	
K. Ohishi, A. Hishida, and N. Honda	F415

Hormone effects on NaCl permeability of rat inner medullary collecting duct	
J. M. Sands, H. Nonoguchi, and M. A. Knepper	F421

Active urea transport by the skin of Bufo viridis: amiloride- and phloretin-	
sensitive transport sites	
J. Ranoport A. Ahuful C. Chaimouitz, Z. Noch, and R. M. Hays	F429

Atrial natriuretic factor does not inhibit basal or angiotensin	
IJ-stimulated proximal transport	
FY. Liu and M. G. Cogan	F434

Evidence suggesting a role for hydroxyl radical in glycerol-induced acute renal failure	
Evidence suggesting a role for hydroxyr radical in gryceror-induced acute renai famure	
S V Shah and P D Walker	F438

Effects of plasma amino acid and hormone levels on renal hemodynamics in humans	
P Castelling C Giordano A Perna and R A DeFranzo	F444

Evidence against oxidant injury as a critical mediator of postischemic acute renal failure	
L. M. Gamelin and R. A. Zaser	F450

Role of Na+-H+ antiport in rat proximal tubule NaCl absorption	
P. A. Preisig and F. C. Rector, Jr.	F46

Renal metabolism of atrial natriuretic peptide in the rat	
J A Bara M Hayashi V Rujii and A I Katz	F466

Guanosine 3',5'-cyclic monophosphate as a mediator of inhibition of renin release	
W. L. Henrich, E. A. McAllister, P. B. Smith, and W. B. Campbell	F474

Effect of systemic pH on pH; and lactic acid generation in exhaustive forearm exercise	
V. L. Hood, C. Schubert, U. Keller, and S. Müller	F479

Bradykinin increases cytosolic free [Ca2+] in proximal tubule cells	
A. Aboolian and E. P. Nord	F48

Renal effects of atrial natriuretic factor are independent of dopamine, receptors	
M. B. Murphy, A. S. Bass, and L. I. Goldberg	F494

	Structure of avian loop of Henle as related to countercurrent multiplier system E. J. Braun and P. R. Reimer	F500
	Ion concentrations in subcutaneous interstitial fluid: measured versus expected values M. Gilányi, C. Ikrényi, J. Fekete, K. Ikrényi, and A. G. B. Kovách	F513
	Time course and vectorial nature of albumin metabolism in isolated perfused rabbit PCT C. H. Park	F520
	Model of renal cell volume regulation without active transport: role of a heteroporous membrane D. J. Welling and L. W. Welling	F529
	Hemoglobin- and myoglobin-induced acute renal failure in rats: role of iron in nephrotoxicity M. S. Paller	F539
	Angiotensin II modulates the intrarenal effects of atrial natriuretic peptide H. M. Siragy, N. E. Lamb, C. E. Rose, Jr., M. J. Peach, and R. M. Carey	F545
	Differentiation of Na*-K* pump in rat proximal tubule is modulated by Na*-H* exchanger Y. Fukuda and A. Aperia	F552
	1. Fukuda ana A. Aperai	F 552
	MODELING METHODOLOGY FORUM	
	CaBP, facilitates intracellular diffusion for Ca pumping in distal convoluted tubule F. Bronner and W. D. Stein	F558
No. 4. 0	EDITORIAL REVIEW	
	Molecular biology of the renin-angiotensin system V. J. Dzau, D. W. Burt, and R. E. Pratt	F563
	Na ⁺ pump in renal tubular cells is regulated by endogenous Na ⁺ -K ⁺ -ATPase inhibitor from hypothalamus H. F. Cantiello, E. Chen, S. Ray, and G. T. Haupert, Jr.	F574
	NMR studies of renal phosphate metabolites in vivo: effects of hydration and dehydration S. D. Wolff, C. Eng, and R. S. Balaban	F581
	Effect of puromycin aminonucleoside on HSPG core protein content of glomerular epithelial cells	
	B. S. Kasinath, A. K. Singh, Y. S. Kanwar, and E. J. Lewis Coupled transport of p-aminohippurate by rat kidney basolateral membrane vesicles J. B. Pritchard	F590 F597
	Na*-K*-ATPase-dependent sodium flux in cortical collecting tubule M. Blot-Chabaud, F. Jaisser, M. Gingold, J. P. Bonvalet, and N. Farman	F605
	Stimulatory effects of neuronally released norepinephrine on renin release in vitro Y. Matsumura, S. Kawazoe, T. Ichihara, H. Shinyama, M. Kageyama, and S. Morimoto	F614
	Glomerular atrial natriuretic factor receptors during rehydration: plasma NH ₂ , and COOH-terminal levels G. Gauquelin, G. Thibault, M. Cantin, E. L. Schiffrin, and R. Garcia	F621
	Accumulation of major organic osmolytes in rat renal inner medulla in dehydration S. R. Gullans, J. D. Blumenfeld, J. A. Balschi, M. Kaleta, R. M. Brenner, C. W. Heilig, and S. C. Hebert	F626
	Glomerular uracil nucleotide synthesis	
	P. Cortes, F. Dumler, and N. W. Levin Glomerular uracil nucleotide synthesis: effects of diabetes and protein intake	F635
	P. Cortes, F. Dumler, D. L. Paielli, and N. W. Levin Effects of respiratory acidosis on HCO ₃ transport by rabbit collecting tubules	F647
	T. D. McKinney and K. K. Davidson	F656

	Locally formed dopamine inhibits Na ⁺ -K ⁺ -ATPase activity in rat renal cortical tubule cells I. Seri, B. C. Kone, S. R. Gullans, A. Aperia,	
	B. M. Brenner, and B. J. Ballermann	F666
	Mesangial cells express PDGF mRNAs and proliferate in response to PDGF P. J. Shuitz, P. E. DiCorleto, B. J. Silver, and H. E. Abboud	F674
	Effects of histidine on vasopressin action: role of decreased prostaglandin production C. P. Carvounis, E. T. Schroeder, P. Cushley, P. Hueber, and D. Patchin	F685
	Influence of kinins and angiotensin II on the regulation of papillary blood flow R. J. Roman, M. L. Kaldunski, A. G. Scicli, and O. A. Carretero	F690
	Whole-cell potassium currents in single early distal tubule cells M. Hunter, H. Oberleithner, R. M. Henderson, and G. Giebisch	F699
	Immunodissection of cortical and medullary thick ascending limb cells from rabbit kidney	
	M. L. Allen, A. Nakao, W. K. Sonnenburg, M. Burnatowska-Hledin, W. S. Spielman, and W. L. Smith	F704
	Secretion of endolymph by semicircular canals of the shark J. L. Garvin, K. R. Spring, and P. A. Santi	F711
	Characteristics of the paracellular pathway of rabbit cortical collecting duct D. H. Warden, V. L. Schuster, and J. B. Stokes	F720
	Neutrophils accentuate ischemia-reperfusion injury in isolated perfused rat kidneys S. L. Linas, P. F. Shanley, D. Whittenburg, E. Berger, and J. E. Repine	F728
	Corticosterone's metabolite is an agonist for Na ⁺ transport stimulation in A6 cells R. L. Duncan, W. M. Grogan, L. B. Kramer, and C. O. Watlington	F736
	Intrarenal renin inhibition increases renal function by an angiotensin II-dependent mechanism H. M. Siragy, N. E. Lamb, C. E. Rose, Jr., M. J. Peach, and R. M. Carey	F749
	Captopril augments the renal response to an amino acid infusion in diabetic adults L. A. Slomowitz, R. Hirschberg, and J. D. Kopple	F755
	Potassium-depletion alkalosis in the rat A. M. Kaufman and T. Kahn	F763
	ANF inhibits vasopressin-induced Ca ²⁺ mobilization and contraction in glomerular mesangial cells	Tier.
	H. Meyer-Lehnert, P. Tsai, C. Caramelo, and R. W. Schrier Inhibition of rat glomerular visceral epithelial cell growth by heparin	F771
	S. Adler Regulation of cytosolic free calcium in isolated perfused proximal tubules of Necturus J. M. Yang, C. O. Lee, and E. E. Windhager	F787
	Kidney epithelial cells express c-sis protooncogene and secrete PDGF-like protein S. Kartha, D. M. Bradham, G. R. Grotendorst, and F. G. Toback	F800
	LETTERS TO THE EDITOR	-
	Hepatic renal interrelations in acid-base regulation R. J. Alpern, R. Star, and D. W. Seldin; D. E. Atkinson and E. Bourke	F807
	ANNOUNCEMENTS	F810
No. 5. N	OVEMBER 1988	
	EDITORIAL REVIEW	
	Quantitative analysis of aldosterone's role in potassium regulation D. B. Young	F811

Effects of renal artery pressure on interstitial pressure and Na excretion	
during renal vasodilation J. P. Granger and J. W. Scott	F828
AVP-sensitive cAMP production is dependent on calmodulin in both MTAL and MCT K. Takaichi and K. Kurokawa	F834
Cyclic guanosine monophosphate increases hydraulic conductivity in rabbit and rat CCT M. A. Dillingham and R. J. Anderson	F841
Parathyroid hormone stimulates ammoniagenesis in canine renal proximal tubular segments M. C. Chobanian and M. R. Hammerman	F847
Importance of anion in hypotonic volume regulation of rabbit proximal straight tubule P. A. Welling and M. A. Linshaw	F853
Ammonia loss from rat proximal tubule in vivo: effects of luminal pH and flow rate	F861
E. E. Simon, B. Fry, K. Hering-Smith, and L. L. Hamm Kinetics of a novel cytosolic protein during the onset of renal epithelial cell growth H. N. Aithal, M. M. Walsh-Reitz, S. Kartha, S. L. Gluck, W. A. Franklin,	
K. M. Knigge, and F. G. Toback	F868
Glutathione protects against exogenous oxidant injury to rabbit renal proximal tubules J. M. Messana, D. A. Cieslinski, R. P. O'Connor, and H. D. Humes	F874
Cl ⁻ -dependent ATP-driven H ⁺ transport in rabbit renal cortical endosomes S. A. Hilden, C. A. Johns, and N. E. Madias	F885
Arginine vasopressin promotes growth of rat glomerular mesangial cells in culture M. B. Ganz, S. K. Pekar, M. C. Perfetto, and R. B. Sterzel	F898
Effects of a physiological dose of ANP on renal function in dogs $R.\ O.\ Banks$	F907
Effect of an altered glutathione content on renal ischemic injury R. C. Scaduto, Jr., V. H. Gattone II, L. W. Grotyohann, J. Wertz, and L. F. Martin	F911
pH in principal cells of frog skin (Rana pipiens): effects of amiloride and potential K. Drewnowska and T. U. L. Biber	F922
pH in principal cells of frog skin (Rana pipiens): dependence on extracellular Na ⁺ K. Drewnowska, E. J. Cragoe, Jr., and T. U. L. Biber	F930
ANF secretion and renal responses to volume expansion with equilibrated blood R. V. Paul, T. Ferguson, and L. G. Navar	F936
Resistance to blockade by saralasin of effect of ACE inhibitors in conscious sodium-restricted dog	
B. G. Zimmerman, J. L. Goering, and P. C. Raich	F944
Age-related changes in body fluid volumes in young spontaneously hypertensive rats M. M. Von Dreele	F953
Effect of synthetic tumoral PTH-related peptide on cAMP production and Na-dependent P, transport	
L. Pizurki, R. Rizzoli, J. Moseley, T. J. Martin, J. Caverzasio and JP. Bonjour	F957
Hypotonic cell volume regulation in mouse medullary thick ascending limb effects of ADH	
S. C. Hebert and A. Sun	F962
Dopamine, receptors in rat kidneys identified with ¹²⁵ I-Sch 23982 R. A. Felder and P. A. Jose	F970
Substrate specificity to maintain cellular ATP along the mouse nephron S. Uchida and H. Endou	F977
Mechanism of phosphaturia elicited by administration of phosphonoformate in vivo M. VanScoy, M. Loghman-Adham, M. Onsgard, M. Szczepanska-Konkel, S. Homma, F. G. Knox, and T. P. Dousa	F984
Mechanism of Li inhibition of vasopressin-sensitive adenylate cyclase in cultured renal epithelial cells	
H. Goldberg, P. Clayman, and K. Skorecki Fluorescent characterization of collecting duct cells: a second H ⁺ -secreting type	F995
G. J. Schwartz, L. M. Satlin, and J. F. Bergmann	F1003

	Effect of vasopressin on intracellular [Ca] and Na transport in cultured toad bladder cells	
	S. M. E. Wong and H. S. Chase, Jr.	F1015
	Specificity in calcium oxalate adherence to papillary epithelial cells in culture R. J. Riese, J. W. Riese, J. G. Kleinman, J. H. Wiessner, G. S. Mandel, and N. S. Mandel	Figor
	Protease effects on adenylate cyclase in potassium-depleted rabbit kidney K. H. Raymond, S. D. Holland, T. K. Hymer, T. D. McKinney, and M. S. Katz	F1025
	RAPID COMMUNICATIONS	11000
	Receptors and cGMP signalling mechanism for E. coli enterotoxin in opossum kidney	
	L. R. Forte, W. J. Krause, and R. H. Freeman	F1040
No. 6. D	ECEMBER 1988	
	EDITORIAL REVIEW	
	Physiological processes revealed through an analysis of inborn errors J. J. Gargus and M. Mitas	F1047
	Phospholipase C activation by prostaglandins and thromboxane \mathbf{A}_2 in cultured mesangial cells	
	P. Mené, G. R. Dubyak, H. E. Abboud, A. Scarpa, and M. J. Dunn Response of the renin-angiotensin system to relief of neonatal ureteral obstruction	F1059
	R. L. Chevalier and R. A. Gomez	F1070
	Renal phosphate transport in humoral hypercalcemia of malignancy L. Sartori, K. L. Insogna, and P. Q. Barrett	F1078
	Response of atrial natriuretic peptide to acute saline loading in essential hypertension A. Mimran, J. Nussberger, J. Ribstein, B. Waeber, and H. R. Brunner	F1085
	Endogenous ANP augments fractional excretion of P _i , Ca, and Na in rats with reduced renal mass F. V. Ortola, B. J. Ballermann, and B. M. Brenner	F1091
	To what extent is microtubular network involved in antidiuretic response? G. Valenti, J. S. Hugon, and J. Bourguet	F1098
	Tonic inhibition of renal response to vasopressin by a pertussis toxin substrate W. B. Jeffries, R. Fallet, G. Gong, P. van Dreal, and W. A. Pettinger	F1107
	α_1 -Adrenoceptor mediation of urinary bicarbonate excretion J. L. Osborn and R. W. Harland	F1116
	Contribution of purine nucleotide cycle to intranephron ammoniagenesis in rats K. Tamura and H. Endou	F1122
	Diluting power of thick limbs of Henle. I. Peritubular hypertonicity blocks basolateral Cl ⁻ channels	
	D. A. Molony and T. E. Andreoli Diluting power of thick limbs of Henle. II. Bumetanide-sensitive ²² Na ⁺ influx	F1128
	in medullary vesicles W. B. Reeves, M. A. Dudley, P. Mehta, and T. E. Andreoli	F1138
	Diluting power of thick limbs of Henle. III. Modulation of in vitro diluting power W. B. Reeves, D. A. Molony, and T. E. Andreoli	F1145
	Acidification adaptation along the inner medullary collecting duct H. H. Bengele, E. R. McNamara, J. H. Schwartz, and E. A. Alexander	F1155
	Characteristics of papillary collecting duct cells in primary culture R. F. Husted, M. Hayashi, and J. B. Stokes	F1160
	Succinate alters respiration, membrane potential, and intracellular K+ in proximal tubule	P1150
	S. R. Gullans, B. C. Kone, M. J. Avison, and G. Giebisch Effect of intrarenal volume expansion on proximal sodium reabsorption	F1170
	J A Hags J P Granger and F G Knox	F1178

Renal adaptation to metabolic acidosis in senescent rats R. Prasad, J. L. Kinsella, and B. Sacktor	F1183
Renal tubular cells are potential targets for epidermal growth factor	11100
P. R. Goodyer, Z. Kachra, C. Bell, and R. Rozen	F1191
Crystal adsorption and growth slowing by nephrocalcin, albumin, and Tamm-Horsfall protein E. M. Worcester, Y. Nakagawa, C. L. Wabner, S. Kumar, and F. L. Coe	F1197
Insulin increases loop segment chloride reabsorption in the euglycemic rat K. A. Kirchner	F1206
Synthesis and release of insulinlike growth factor I by mesangial cells in culture F. G. Conti, L. J. Striker, S. J. Elliot, D. Andreani, and G. E. Striker	F1214
Urinary cGMP as biological marker of the renal activity of atrial natriuretic factor K. R. Wong, MH. Xie, LB. Shi, FY. Liu, CL. Huang, D. G. Gardner, and M. G. Cogan	F1220
Effect of ureteral excision on inner medullary solute concentration in rats T. L. Pallone and R. L. Jamison	F1225
Effects of intrarenal adenosine on renal function and medullary blood flow in the rat M. Miyamoto, Y. Yagil, T. Larson, C. Robertson, and R. L. Jamison	F1230
Effect of spironolactone on glucocorticoid-induced colonic cation transport $C.\ P.\ Bastl$	F1235
Increased single-nephron protein excretion after renal ablation in nephrotic rats $T.\ W.\ Meyer\ and\ H.\ G.\ Rennke$	F1243
LLC-PK, cells express Na*-lactate cotransport in apical membranes after confluency C. Poustis-Delpont, R. Mengual, and P. Sudaka	F1249
Adaptation of distal tubule and collecting duct to increased sodium delivery. I. Ultrastructure B. Kaissling and B. A. Stanton	F1256
Adaptation of distal tubule and collecting duct to increased Na delivery. II. Na ⁺ and K ⁺ transport	1100
B. A. Stanton and B. Kaissling	F1269
SPECIAL COMMUNICATIONS	
The everted renal tubule: a methodology for direct assessment of apical membrane function	
B. G. Engbretson, K. W. Beyenbach, and L. C. Stoner	F1276
RAPID COMMUNICATIONS	
Atrial natriuretic factor and salt adaptation in the teleost fish Gila atraria	
C. Westenfelder, F. M. Birch, R. L. Baranowski, M. J. Rosenfeld, D. K. Shiozawa, and C. Kablitz	F1281
Subject Index to Volume 24	F1287
Author Index to Volume 24	F1297

